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VEGETABLE Situation

ECONOMIC RESEARCH SERVICE • U.S. DEPARTMENT OF AGRICULTURE

THE VEGETABLE SITUATION

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Approved by
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and Summary released
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Principal contributors
Charles W. Porter
Joseph Combs

Commodity Economics Division

Economic Research Service

U.S. Department of Agriculture
Washington, D.C. 20250

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SUMMARY

With summer *fresh vegetable* acreage slightly smaller than last year, potential production would be 3 percent less than 1974, based on average yields of the past 3 years. Acreages are less for cabbage, carrots, celery, and tomatoes, but there are larger acreages and probably heavier supplies of lettuce and sweet corn. Output of peppers, cucumbers, and late summer storage onions may not be changed greatly from a year ago. In addition, total melon production is expected to be slightly more than the small 1974 crops.

Some seasonal decline in vegetable prices is likely beginning in August, but farm and retail vegetable prices are running well above a year earlier and will likely continue to average well above corresponding months of last year for most of the rest of 1975.

With average yields and a slightly larger acreage, processing vegetable production could move slightly ahead of 1974. And with a substantially larger combined carryover of canned and frozen vegetables, the total supply of *processed vegetables* would be moderately larger than either of the 2 previous seasons. Larger packs of pickles and tomato products are expected. The prospective supply may not change greatly for other leading canned items. Although acreage is off for the five leading vegetables used for freezing, larger carryovers suggest that frozen vegetable supplies will be close to what was available for the 1974/75 season.

Although wholesale prices of processed vegetables have eased downward in recent months, it would take bumper yields and heavy production to put any further substantial downward pressure on processed vegetable prices this fall. Furthermore, packers' input costs continue to rise, though not as much as in 1974. Labor, energy, and transport costs are higher, but raw product costs are mixed, with more items the same or less than a year earlier. Under relatively well-balanced supply conditions, processed vegetable prices may hold generally steady this summer and fall, but with more temporary off-the-pack-line allowances showing up this year.

The *summer potato* crop is estimated around 13 percent smaller, with both acreage and yield below 1974 levels. Early summer prices have been

substantially higher compared with most recent seasons. Although there have been recent declines, the market is expected to remain seasonally high until fall harvests are made. The first acreage estimates for the important fall crop will be published in the August 11 Crop Report.

A 3 percent larger acreage of sweetpotatoes for harvest this fall with the chance of continued uptrend in yields will result in a larger 1975 crop. Most of the 1975 expansion centers in North Carolina, Louisiana acreage is substantially less. It appears that canners. purchases will be smaller, and prices are expected to range below 1974/75 levels.

With the largest carryover of old crop *dry beans* in several years, the planting of 6 percent less acreage with average yields is not going to provide much upward push for 1975/76 prices. White bean prices may average higher this new season, but pinto prices are likely to move down, reversing the pattern of 1974/75.

RECENT DEVELOPMENTS AND OUTLOOK

FRESH VEGETABLES

Summer Price and Supply Prospects

With the summer fresh vegetable acreage estimated at 355,000 acres, slightly less than in 1974, the potential production of 14 crops could turn out to be 3 percent below a year ago. This assumes yields will equal the average of the past 3 years, but be below 1974. Among the major crops there is less acreage in broccoli, carrots, cauliflower, celery, and peppers, but slightly more lettuce, tomatoes, cucumbers, and snap beans, and practically the same acreage of cabbage. Excluded from these comparisons are summer onions, where acreage is down 3 percent from 1974. Acreage of the important storage onion crop by itself is 1 percent less than the relatively large 1974 planting.

Combined acreage of cantaloups, honeydews, and watermelons is 6 percent larger than the sharply reduced planting in 1974. The acreage increase noted for the current season would result in 3 percent larger tonnage of all melons combined this season, if yields hold near the average and below 1974.

Commercial vegetable prices have been about a fourth higher than a year earlier. Reduced supplies in the first quarter were responsible. Temporarily light supplies of tomatoes and onions have kept the index of vegetable prices high in June and July. The June figure of 219 (1967=100) was an all-time record. The July figure of 208 was only slightly lower. Some further seasonal decline in prices is expected, as nearby summer supplies move to market, but the decline may be somewhat later than usual. Nevertheless. both farm and retail prices are expected to average well above corresponding months a year earlier for most of the rest of 1975. The impact of home gardening on vegetable prices is difficult to measure, but it is not expected to have much effect, except possibly for tomatoes.

Winter and Spring Supplies

Fresh vegetable production in the winter quarter of 1975 was 33.4 million cwt, 4 percent less than the same period a year earlier. Substantial decreases in cabbage and carrots with moderately smaller supplies of lettuce offset larger output of other crops. Imports of fresh vegetables and melons were sharply below a year earlier in the first quarter as well. Import activity during April and May perked up relative to a year earlier as supplies of tomatoes and peppers from Mexico reaching this country showed sizable gains. Nevertheless, total U.S. imports of fresh vegetables from January through May this year still lagged a year earlier by 11 percent, according to Plant Quarantine data.

U.S. spring vegetable production estimates are not available yet, but the acreage for harvest was 1 percent more than last year. Shipments from major growing areas in the second quarter, as reported by Agricultural Marketing Service, reflect heavy lettuce volume, and also more peppers and cabbage. Tomato and carrot movement has been lighter in the second quarter and spring onion production has been reported 18 percent smaller than last year. Based on partial shipments data, it is probable that U.S. spring vegetable output was larger, as were imports, and surprisingly, prices were higher too.

Prospects for Major Fresh Vegetables

Tomatoes

Summer tomato acreage is virtually the same as a year earlier, and average yields would point to a moderately smaller crop this summer. Supplies have been increasing seasonally as central California volume picked up in mid-July, and several local producing areas scattered across the country began harvesting in late July. By then, grower prices had

Table 1—Vegetables and melons for fresh market: Reported commercial acreage and production of principal crops, selected seasons, 1973, 1974, and indicated 1975

Seasonal group and crop	Acreage				Production			
	Harvested		For harvest	Percent of			Indicated	Percent of
	1973	1974	1975	1974	1973	1974	1975	1974
	1,000 acres	*1,000 acres*	*1,000 acres*	*Percent*	*Million cwt.*	*Million cwt.*	*Million cwt.*	*Percent*
Winter	174	196	171	87	31	35	33	94
Spring	254	235	238	101	39	39	38	97
Summer[2]:								
Snap beans	29	30	31	103	1	1	1	100
Broccoli[3]	13	9	7	78	1	1	([4])	---
Cabbage[3]	26	27	27	100	6	7	7	100
Carrots[3]	17	15	13	87	5	5	4	80
Cauliflower[3]	9	9	8	89	1	1	1	100
Celery[3]	7	7	6	86	3	3	3	100
Sweet corn	110	105	108	103	7	7	7	100
Cucumbers	16	15	16	107	2	2	2	100
Eggplant	1	1	1	100	([4])	([4])	([4])	---
Escarole	2	2	2	100	([4])	([4])	([4])	---
Lettuce	49	52	52	100	13	13	13	100
Green peppers[3]	23	23	23	100	2	2	2	100
Spinach	2	1	1	100	([4])	([4])	([4])	---
Tomatoes	64	60	60	100	8	8	8	100
Total 14 vegetables	368	357	355	99	50	50	49	98
Cantaloups	64	44	51	116	8	6	7	117
Honeydews	11	10	9	90	2	2	2	100
Watermelons	158	134	140	104	15	13	13	100
Total melons[5]	233	188	200	106	25	21	22	105
Total vegetables and melons[5]	1,029	977	964	99	145	146	142	97

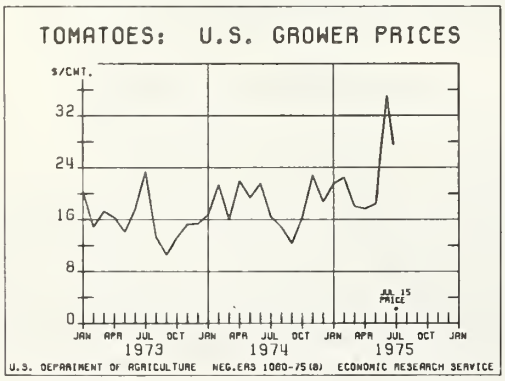
[1] Based on average yield per acre. [2] July, August and September. [3] Includes fresh market and processing. [4] Less than 1. [5] May not add due to rounding.

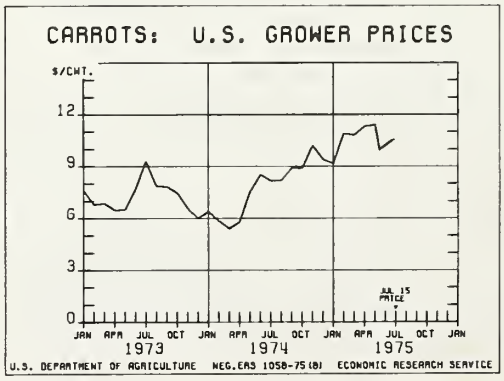
moderated. This is in sharp contrast with late spring. During June, supplies were restricted, causing the U.S. average price to growers to reach 35 cents a pound, the highest ever recorded. Central California sections were later than usual this year. Production in the southern States, which succeeded the Florida harvest that ended in May, was not large enough to fill the supply gap.

Grower and retail prices may be expected to hold higher than a year ago, with generally good trade demand prevailing. In New Jersey, the most important eastern producing State, heavy rains in mid-July probably reduced crop prospects.

Carrots

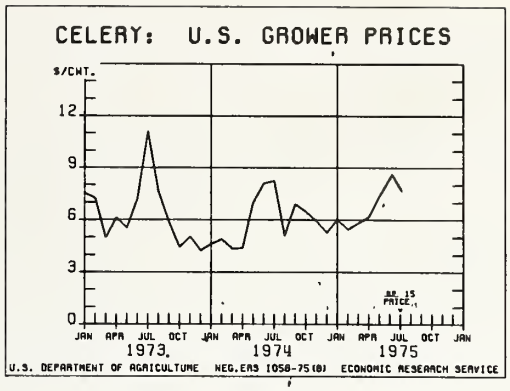
Summer acreage is 8 percent smaller again this year and with average yields of the past 3 years, projected tonnage would be 9 percent less. California, the major supply source, is reported to have 5,900 acres or 8 percent less this season, and only





Michigan, among the more important summer States, reports any increase. Colorado, Wisconsin, Washington, and Texas (High Plains) also contribute light tonnage this particular season.

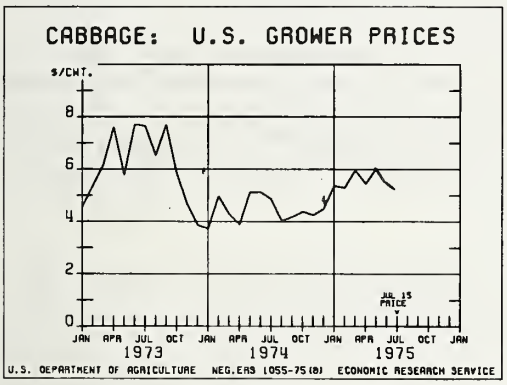
With reduced supplies available thus far this year, grower prices have been sharply higher than the first half of 1974. But as harvest volume in the Salinas areas increased in late July, California shipping point prices moved down to $4.00 per 48 pound carton of 1 pound film bags, compared with $4.50 last year. Whether this lower price persists depends partly on processor demand in California, and partly on pressure of seasonally larger vegetable supplies.



Cabbage

With cabbage acreage virtually unchanged from a year ago, average yields would result in production moderately less this year than last. The Atlantic Seaboard States, harvesting in August, planted slightly more this year, however acreage was cut in the Midwest. Virginia and North Carolina, except for the mountain areas, completed harvest from a larger acreage by the end of July.

Mid-July f.o.b. prices from Michigan and New Jersey points were in the 5-6 cents per pound range, roughly the same as last year. As with other vegetables, prices moved down in late July in response to seasonally heavier supplies. Late July prices in Michigan were 3.8 cents per pound.



Celery

Summer celery acreage is down to 5,920, or 13 percent less than last summer. With historical average yields, this would translate to 16 percent smaller output.

Harvest in the central coast district of California reached good volume by mid July. The late July shipping point price of $4.85 per crate of 2-3 dozen from Salinas, Calif. and western Michigan points is mixed relative to year-earlier levels. However, with the prospect of less volume this summer, celery prices may be expected to hold generally firm to strong.

Sweet Corn

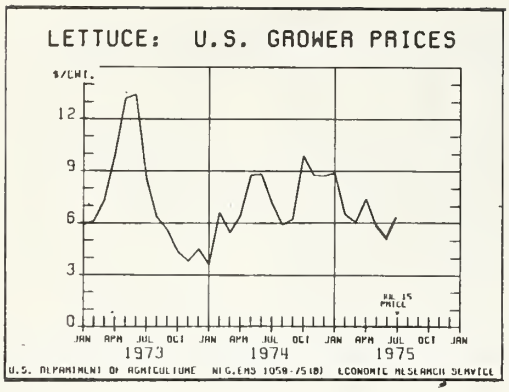
With acreage up 2 percent to 107,500 acres, potential summer corn production would be up the same percentage, provided yields are equal to 3-year averages. In all the important States from Illinois east through Massachusetts and Connecticut, acreage for harvest is the same or more than last year, except in Pennsylvania. Supplies increased markedly in mid-July with heavy shipments coming from New Jersey. By the latter part of the month, several other midwestern and eastern States reached substantial volume.

Prices to growers in New Jersey began at moderate levels, (60 cents per dozen, plus cooling) as of early July. Later in the month the price worked downward to 57 cents, making this crop one of the less expensive vegetable choices for consumers this season. Continued warm and wet weather would tend to encourage maximum yields and continued relatively low prices.

Lettuce

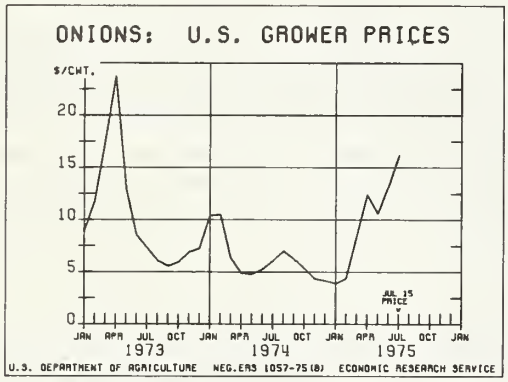
A slightly larger summer acreage in California plus sharply larger plantings in New York raised the U.S. total to nearly 52,500 acres, 1 percent more than 1974. California summer acreage usually accounts for nearly three-fourths of all summer plantings and as much as 80 percent of the tonnage. Colorado, Michigan, Wisconsin, and Washington each market small amounts in the summer, too. Average yields would result in 13.4 million cwt again this year, at least equalling the 1974 record output.

Lettuce shipments have been heavy, with depressed prices occurring much of the spring and into the summer. As of late July, the price of $1.82 per carton of 24 f.o.b. Salinas probably came close to harvest costs for several packers. Prices were as low as $1.75 per carton earlier. With this distress market, some California fields were disked down unharvested. This condition was partly the result of cook, rainy weather which postponed the beginning of the harvest, causing more than the usual number of fields to be ready at once.



Onions

Onion acreage for harvest in summer producing States is down 3 percent from a year earlier. This includes both storage and non-storage crops. In the non-storage States, production is forecast at 2.4 million cwt, off 21 percent from 1974. Acreage in the major storage States is 1 percent less than last year, at 69,340 acres, with no sharp changes reported in the major producing areas. A production forecast will be made in September.



With reduced spring output and the abbreviated supply from the earlier non-storage summer States, onion prices to growers have held at high levels since March. In April, May, and the first half of June, when the smaller Texas spring crop dominated the supply picture, prices of 11 cents and 12 cents per pound were more than double the distressed 4-5 cents of a year earlier. These increased prices moved even higher in July before the main harvest began. Limited supplies from New Mexico, the Texas High Plains, and New Jersey were bringing $10.00 or more per 50 pound sack. These prices are expected to fall sharply when seasonally heavy supplies from New York, Michigan, Idaho, and California reach the market during August. In Michigan, the crop started late but June development was generally favorable. As of early July, crop prospects in New York were very good. The Idaho crop is about 2 to 3 weeks behind normal, and in California's central coast harvest began in mid-July followed soon after by the San Joaquin Valley. The Tulelake crops will be available by mid-September.

Watermelons

With spring acreages up 1 percent, domestic shipments have been slightly above 1974 until the first week of July. Border crossings from Mexico as reported by the Agricultural Marketing Service were below a year earlier. With slightly smaller overall supply conditions, the summer market was off to a good start this year. Prices to growers have been reported 4.0-5.2 cents per pounds, versus 3.3-3.4 cents last year for June and July.

Summer watermelon acreage is 4 percent larger than 1974. Average yields would result in a crop about 2 percent larger this year. By the middle of July, the harvest was declining seasonally in northwest Florida, south Georgia, and south Alabama.

Prices for Charleston Grays were 2.0-3.0 cents per pound with Jubilees worth 3.0-3.5 cents. South Carolina and Texas were shipping heavily during mid-July. The larger California crop in the Central Valley was fully 2 weeks late this summer. Supplies will be available there through August. In the East, the seasonal supply peak tapers off after the South Carolina July harvests, but adequate supplies reach markets from North Carolina and the Delmarva Peninsula through August.

Retail watermelon prices are substantially higher this year, at least partly because transport costs for this bulky product have risen markedly. It is probable that permanently higher transport costs may have a negative effect on per capita use of this crop.

Cantaloups

The summer quarter cantaloup acreage is up 14 percent from reduced acreages of 1974. Assuming average yields, this would result in a crop 9 percent larger. This year.s acreage and production, though up from 1974, will be substantially below the levels of most years in the late 1960's and early 1970's. Labor problems and attractive crop alternatives are behind this trend.

Most cantaloups originate in California but some are harvested from northern and eastern Texas points after mid-July. Georgia, Michigan, and South Carolina also have limited production, but most of the U.S. supply comes from California's West Side District beginning in late July and running through early September, with some limited volume into mid-October.

Prices for crates of 36's f.o.b. Kern County, California were $11.00 in late-July, with seasonal declines showing up about 2 weeks later than usual.

PROCESSED VEGETABLES

Reviewing the 1974/75 Season

The 1974/75 processed vegetable supply again was only slightly larger than the previous year. Omitting most concentrated tomato products from the comparison where no complete data exist, the available supply of canned vegetables was only slightly larger with frozen items moderately more. Early in the marketing season, wholesale-retail prices moved up sharply to compensate for the cost increases associated with making 1974 packs. Higher prices choked off movement though trade channels beginning last December. At first, it was thought this reduced rate of disappearance resulted from earlier over-buying by all segments of the trade including consumers, during the first 9 months of 1974. However, the slow movement of canned and frozen vegetables persisted too long for this to have been the sole factor. As the marketing season progressed, it became evident that some people were switching to less costly staples—dry beans, dry beans, and fresh potatoes—or at least they were using fewer vegetables in their meal planning. As would be expected, the higher priced frozen vegetable specialities were the hardest hit by this economy.

Despite the large supply, the total disappearance of canned vegetables in the season now ending fell about 2 percent below the record 1973/74 period. This movement reflected higher prices for the pack, greater unemployment, reducing consumer demand. As a result the industry has the largest carryover in 3 years. This will not pose a marketing problem since the previous carryovers really had been uncomfortably low. Current season-end stocks are still markedly less than during the early 1970's.

Stocks of frozen vegetables on July 1, excluding potatoes, were record large for that month, and were 6 percent more than on the same date a year earlier.

The 1975/76 Prospect as of August 1

With average yields from a slightly larger acreage, processing vegetable production would move slightly ahead of 1974. And with a substantially larger carryover, the combined supply of canned and frozen vegetables would be moderately larger than either of the 2 previous seasons.

Considering canned vegetables by themselves, most of the gain in supply will come from pickles, beets, tomatoes, and tomato products. For the other leading items, the prospective supply will not likely change greatly. For most concentrated tomato products, near-normal yields would result in ample supplies of these items this coming season. Although the acreage of five important freezing vegetables is off, larger prospective carryovers imply that supplies of frozen vegetables, by themselves, will be very close to what was available this past season.

Although a more generous supply of processed vegetables is expected, no substantial price weakness is expected to develop. However, wholesale prices of canned vegetables have eased downward in recent months. It would take bumper yields and heavy production to put any substantial downward pressures on processed vegetable prices this fall. Then, processors would lower prices further to stimulate movement. Furthermore, canners' and freezers' input costs will rise once again this year, though not as much as in 1974. Labor, energy, and transport costs are higher, tinplate costs are up slightly, but raw product costs are mixed with more items the same or less than last year.

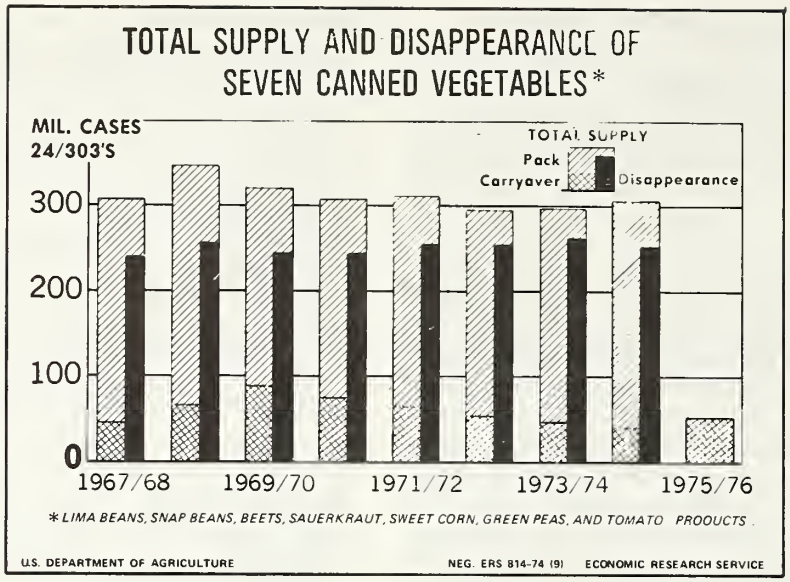
Except for tomatoes the industry has taken a rather conservative approach in planning for market requirements this fall. Acreage increases for most processing vegetables were not as strong as might normally have been anticipated in view of past supply responses. Experience with slackened rates of movement through much of 1974 and prospects for a

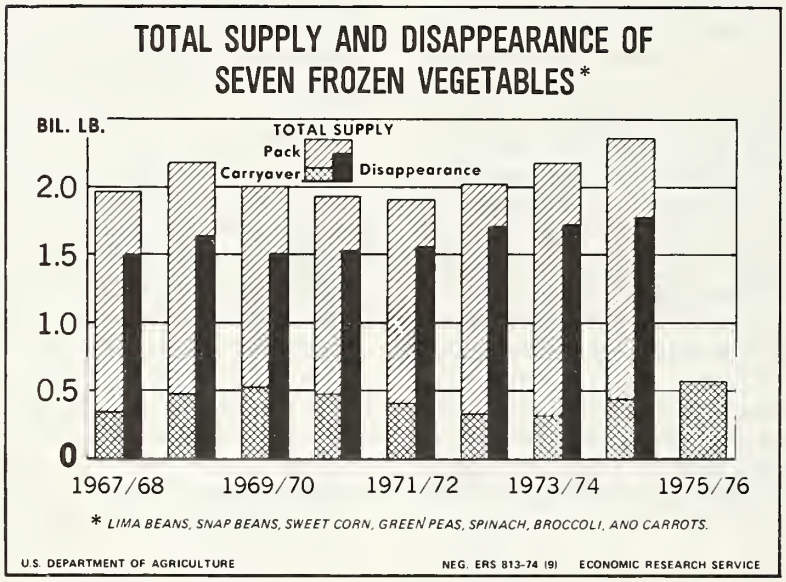
Table 2—Vegetables for processing: Acreage and production, United States

Crop	Planted acreage			Production		
	1973	1974	Contracted 1975	1973	1974	Indicated 1975
	1,000 acres	*1,000 acres*	*1,000 acres*	*1,000 tons*	*1,000 tons*	*1,000 tons*
Snap beans	310	320	279	742	743	N.A.
Green peas	435	463	462	501	573	572
Spinach (winter & spring)	24	24	23	140	160	N.A.
Green lima beans	83	80	82	98	86	N.A.
Beets	18	20	20	201	241	N.A.
Sweet corn	489	512	512	2,179	2,055	N.A.
Cucumbers for pickles	132	140	[2] 131	599	596	N.A.
Tomatoes	306	344	367	5,935	7,020	N.A.
Total - 8 vegetables[1]	1,797	1,903	1,876	10,395	11,474	N.A.

[1] May not add to total due to rounding. [2] Spring and summer. N.A.—Not available.

Data from Vegetables-Processing, SRS, USDA.





slow pick-up in economic activity probably has prompted this rather cautious attitude.

Snap Beans

Contracted acreage of snap beans is 8 percent less than last year, a reflection of heavier stocks of both canned and frozen beans. Less than average movement from a record large supply this past season caused canners to cut back from their earlier intentions. Acreage for freezing is 13 percent less while canned is 7 percent below the 1974 figure. Wisconsin, the leading producer, has a 2 percent larger acreage under contract this year. In contrast, Oregon cut its acreage by more than a fourth, and New York, the other leading producer, contracted for nearly a tenth less acreage this season. Early crop indications suggest good yields thus far on the Atlantic Seaboard. In the Midwest, processing activity was under way by the middle of July with the Pacific Northwest coming in at about the same time, too. Crop conditions appear normal at this writing.

Stocks of canned beans on June 1 were in excess of 15 million cases, 24/303's, almost a record large supply for that date. Between January 1 and June 1 this year only 19 million cases moved from canners' hands. In recent years, mostly when supplies were less generous, 20-22 million cases left canners' warehouses. With the largest carryover since 1971, plus the prospect of only a moderately smaller 1975 pack, the prospective supply of canned snap beans

looks large when related to sales in recent years.

Frozen snap bean stocks on July 1 were 28 percent larger than a year earlier. Should the 1975 pack be reduced in line with the 13 percent acreage cut, the 1975/76 supply would be less than in either of the two previous packs. This reduction probably would bring supplies closer to freezers' expected demand.

Lima Beans

Total lima bean acreage in 1975 is 3 percent larger this season. This is divided into 52,450 acres for freezing and 29,670 acres for canning. Most of the increased acreage is in the canning sector which is up 8 percent this year.

The additional 2,000 acres for canning will help build up depleted canners' stocks which are low again this year. Wholesale prices remain much above a year earlier.

Stocks of frozen Fordhook limas on July 1 were 22 percent more than a year earlier, although the figure of 14 million pounds is not excessive. However, nearly 35 million pounds of frozen baby limas is more than processors care to see this time of year. As a result, eastern freezers have cut back 1975 acreage, and prices to growers are expected to average somewhat less than a year earlier.

Peas

Reduced yields have placed the first U.S. contract tonnage estimate in 1975 at 548,750 tons, down 4 percent from a year earlier. The estimated average yield this season is 1.25 tons per acre compared with 1.35 in 1974 and 1.19 in 1973. These totals include combined output for canning and freezing. Hot weather in Wisconsin caused some acreage to be bypassed, and in Minnesota excessive rain close to harvest time reduced yields. Early planted fields in Maryland and Delaware had spotty stands, but later fields did much better, despite some dry weather in June. Hot weather also may have cut yields in eastern Washington, but west of the Cascades harvest was scheduled to begin late in July.

With the largest carryover in 3 years, the 1975/76 canned supply of peas probably will be fairly close to other recent seasons. At this writing, the size of the canned pack is not available, but it probably will be about the same or slightly less than canners' plans may have called for. With new pack and seasonally heavy supplies available, canners' list prices eased down slightly between June and July.

Stocks of frozen peas on June 1, the carryover month, were 79 percent larger than last year's short supply but well below record stocks for that date. With 5 percent less acreage devoted to freezing this year and with smaller yields than last year, present conditions imply a reduced pack, but an adequate supply, and rather routine markets with only moderate price changes at the most. Nonetheless, wholesale prices compared with late 1974 are off nearly $0.50 to $1 per case, down to $4.50 for 24/10-ounce packages. Bulk prices have held steadier.

Sweet Corn

Total sweet corn acreage for processing is about the same as a year earlier. One percent more acreage is planned for canning and 3 percent less is under contract for freezing. There are no big changes in the acreage pattern among the major producing States this year. Midwest contract prices are running about the same to $2.00 per ton higher.

Stocks of canned corn on June 1 were 7.7 million cases, 24/303's pointing the way to another unusually small carryover. Packing last year was curtailed by an untimely freeze in Minnesota which resulted in a total supply smaller than the total disappearance the previous 2 market seasons. But reduced demand for processed vegetables, and ample supplies of canned peas and beans and frozen corn, made it easier to maintain shelf positions despite a small pack. Average yields this year would bring supply levels closer to what the trade would normally absorb. The 1974 pack was only 46 million cases, 24/303's. This year 50-52 million would be close to a normal pack. With these tight supplies, wholesale prices for canned corn did not decline earlier this year as was the case of other processed vegetable prices.

In contrast to canned, frozen sweet corn stocks on July 1 were sharply higher than a year earlier. All this increase is in cut corn pack. This remaining supply is the largest for the date since 1970. The reduced 1975 acreage under contract is expected to bring supplies in closer balance with demand beginning this fall.

Tomatoes

Further increases in tomato acreage will be used to meet expanding demand for a wide range of products. U.S. acreage is up 11 percent to 367,480 acres, with a 15 percent gain coming from California, the source of four-fifths of the U.S. output. With average to above average yields in that State, tomato tonnage should be substantially above 1974. The resulting packs should provide adequate supplies of all items.

Growing conditions in California improved after a slow wet start which necessitated an unusual amount of replanting. With the large acreage under cultivation this year, it is possible that some bunching of harvest may occur with bottlenecks developing at receiving plants. On the Atlantic Seaboard, heavy rains in mid-July may reduce yields and hamper harvest activity, especially in southern New Jersey where damage was reported especially severe.

Contract prices to growers are about $2 per ton less this year in California. The base price of $53.50 per

ton is supplemented by premiums for early and late season delivery. One New Jersey contract of $72 per ton is the same as a year earlier. Elsewhere contracts are generally reported the same or slightly higher than last year.

Remaining supplies of most tomato products are on the light side, as trade demand has been relatively strong this past season. Prices have held firm to higher thus far in 1975. Stocks of canned tomatoes on April 1 were sharply higher than the tight supply reported a year earlier. Nevertheless, stocks are still less than other recent seasons on the same date. The same is roughly true for tomato juice more than last year, but less than in other years. Sharply higher prices for catsup and paste suggest very tight supplies at the end of the 1974/75 season. The new pack should meet strong trade demand. A leading California processor recently announced new season opening prices: for round tomatoes and juice, slightly higher; catsup unchanged to lower, depending on can size; paste up, institutional sizes less; but sauce and puree were essentially unchanged.

Imports of canned tomatoes from July 1, 1974 through May 1975 at 61 million pounds were 9 percent less than a year earlier. Paste shipments to this country were off by 68 percent, down to something less than 24 million pounds in the same period. Mediterranean producers found ready markets on the Continent at sharply advanced prices over past years.

In California, some additional paste evaporating and aseptic bulk storage capacity will be available this year. This is needed to help handle as efficiently as possible the larger volume demanded. Another advantage of bulk and drum storage is the freeing of manufacturers from making early committments to a mix of products and container sizes that might not reflect market needs.

Broccoli

Stocks of frozen broccoli on July 1 were moderately less than the large quantity on hand a year earlier. The California pack thus far this year has been reported at 88 million pounds compared with 111 a year earlier. This will bring stocks levels to a more manageable figure.

Frozen broccoli prices have been generally steady thus far in 1975, and are only slightly less than the high prices recorded in September and October 1974.

Beets

Stocks of canned beets on April 1 were the largest since 1971, nearly 6 million cases, 24/303's. With 1 percent more acreage under contract this season, another record pack is theoretically possible. But when supplies are on the generous side, as they are now, there is a chance that not all the crop will be used.

Wholesale prices for canned beets are still sharply higher than a year ago, but prices for most can sizes and styles have eased downward slightly from winter levels.

Sauerkraut

Kraut stocks on July 1 were much larger than last year, though they did not reach record levels for the month. It appears that packers expected the August 1 carryover to be large enough to call for an 8 percent reduction in tonnage contracted this season. There will be some additional open market tonnage purchased later this summer.

Wholesale prices are about the same or less than last summer, a conspicuous exception to the price pattern for most processed vegetables. At that time, though, supplies were tight, and a substantial price rise had occurred earlier. New York packers have been "trading" at lower prices, while Midwestern prices are steadier at the same levels as a year ago. As a result, the price of a case of fancy 24/303's in New York was quoted at $4.10, but the same Midwestern product listed at $4.90-$5.25 in July.

Spinach

Frozen spinach stocks on July 1 were 11 percent below a year ago when a record for that particular month was set. California freezers, faced with a large carryover this season, reduced the scope of their 1975 operations. Winter and spring tonnage combined, as reported by SRS totaled 151,200 tons, down 6 percent. Canned spinach stocks are on the generous side, as there were 4.1 million cases in canners' hands on the March carryover date. Canned spinach prices recently have been weak but may strengthen. The supply position of the competing frozen product no longer looks as large as it once did.

Cucumbers for Pickles

Preliminary contract acreage of spring and summer cucumbers is 131,210 acres, up 8 percent from a year earlier. This accounts for all but 7 or 8 percent of the U.S. supply.

A trade association sample of packers noted that April 1 stocks were off 6 percent from a year earlier. Increased 1975 contracting activity may work to build up inventories this fall. All the major States except Wisconsin planted larger acreages this year. And Wisconsin expects about the same.

Asparagus

Frozen asparagus stocks on July 1 were 19 million pounds, 18 percent less than a year earlier. As of mid- and late July, packers have been prorating orders. This has resulted from a reduced pack made in too brief a harvest season. Quality of raw product deteriorated after June 1, bringing the season to a close.

On the other hand, canners carryover stocks as reported last on March 1 were 2.4 24/303's million cases, a record large supply for that date. This year California canners shut down early, and as of early July Michigan growers had received 37 percent less raw product. The reduced 1975 canned pack combined with this larger carryover are expected to provide adequate supplies for 1975/76. Prices reported for July are lower than last year.

POTATOES

A 13 percent lower summer potato production in 1975 caused a runup in farm, wholesale, and retail prices. Pegged at 21.8 million cwt., the crop size is very much a repeat of the supply situation 2 years ago. This time around, Virginia, New Jersey, and California comprise the reduction. However, all States have somewhat less acreage for harvest, the result of bleak price prospects last winter when planting decisions were being firmed up. Yields are off a little, too. Noticeable declines in North Carolina, Virginia, and Delaware resulted from insufficient moisture.

So tablestock and chipstock prices are higher by 25-50 percent at the farm compared with summer's open in 1974.

Spring and Early Summer Cash Markets

During April and early May, shipping point prices were low, due to pressure of remaining stored stock in the fall states. About mid-April grower prices began to rise, confirming the prospect of a small spring crop. California prices in the Kern District opened about May 10 at $6.62 per cwt basis, and ran rapidly to nearly $9.00 when the weather situation on the Atlantic Seaboard became apparent.

In early June, North Carolina and southeastern Virginia weather started out dry and continued dry through the month. Total precipitation for June was less than half normal, at a time when the crop needed abundant moisture. Another effect was to clear remaining Maine stocks—and last year's generous production there guaranteed at least some tubers in late storages of salable quality—at a season high price of $4.00 per cwt. This strong market also put a premium on remaining shipments from Baldwin County, Alabama where prices closed at $8.80 per cwt.

Then in early July, northeast Alabama &Sand Mountain district, chiefly? then came to a strong market, knowing its successor deals in North Carolina and Virginia would be off in quality, off in quantity, and up in price. Prices to Alabama growers ranged around $11.60 per cwt in June 1975, up from $9.50 &also an unusually elevated crop value? in 1974.

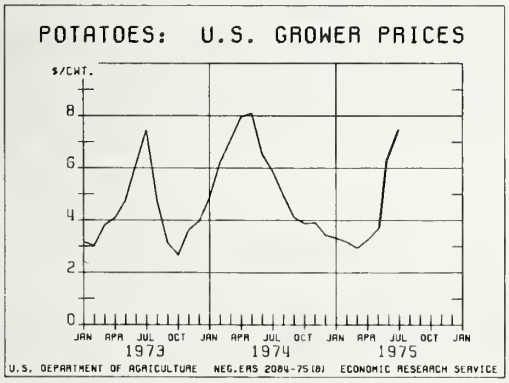
These high spring and summer prices came at the same time that processed product markets were being discounted. This rather unusual spring-summer price sequence shows the differences in demand between fresh and processed potato markets.

An early season high price often prompts early digging further north along the East Coast. Potatoes can be dug early in New Jersey and Long Island in order to capitalize on peak prices. Early movement of local deals in the East is the key to Maine growers' prospects. There, as eslewhere, a frozen product hangover persists. Earlier-than-usual fresh marketings may be considered by Maine's shippers this fall.

Futures Activity

Given the above cash market oriented thinking, the New York Mercantile Exchange May 1976 future contract price leaped to a summer high of $9.94 per cwt (delivery in NYC) with November 1975 at $6 per cwt. Early in the summer traders were apparently ignoring the heavy cold storage holdings of processed potatoes reported on June 30, 63 percent higher than 1974.

In late July and early August, cash and future prices weakened as marketing elements renewed interest in the fundamentals including these heavy stocks of processed products, and the fall crop prospects. Current thinking suggests fully adequate supplies this fall|no repeat of 1972 or 1973, though no surplus tonnage as in 1974.



Fall Prospects

Red River Valley

Excessive moisture and subsequent inundation of potato acreage occurred in Minnesota and North Dakota in early summer. Growers' representatives there pegged potato acreages lost, as of late July.

Generally, destruction of the potato crop took place on a band extending 3 miles east and 3 miles west from Fargo-Moorhead northward thru Grand Forks. On the Minnesota side about 9,000 to 10,000 acres were presumed to be seed stock. Beyond that

perimeter of virtually complete losses, potato stands benefitted by the rain, at least when they weren't subject to flooding. All told, Minnesota and North Dakota farmers had hoped to harvest from 214,000 acres, as indicated by the March Prospective Plantings report, shy of 1974's 229,000. But now, they will be digging this fall from a reduced acreage on account of flood losses. Further information will be included in the general Crop Production report to be released on August 11.

Idaho

Weather and crop bulletins from Idaho have chronicled a slower potato crop development so far this spring and summer. And continuous above-normal temperatures through mid-July still did not bring this important crop even with last year's apparent progress. But the Gem State yield per harvested acre was down in successive 1973 and 1974 crops, so modest recovery cannot be ruled out. The effect of a small return to average yields would place annual crop production at just under 77 million cwt, 4 percent lower than 1974.

Oregon

The one State that *did* report increased potato plantings intentions is Oregon, 14 percent above its 1974 acreage. More processing outlets and more conversion of desert-type land to agriculture played a role. Businesses also prefer to further diversify geographically their procurement of raw potatoes for processing. In more than one instance, sugar refineries did not have adequate alternatives in the sweetener industry and chose instead to add investment in potato growing and processing.

Maine

The fall harvest of Maine potatoes likely will turn out smaller in 1975 than last year. Fewer acres and slowed crop development have contributed. Future prices have responded accordingly.

Adjustments are in prospect for uses of the Maine crop. In the 1973/74 season, 6,969,000 cwt was made into frozen and dehydrated foods; a negligible 310,000 cwt was used in starch. With excessive production in fall 1974, some starch facilities in Maine had to turn away raw product. In all, Maine crop utilized for starch was 1,350,000 cwt, a 400 percent rise. Food use took 7,955,000 cwt of the 1974 crop, 14 percent more than the previous year. (The food total does not include chipping of Maine potatoes at sites outside Maine). During 1975/76, foods may be down slightly and starch use—always the most volatile component of crop utilization—will backtrack considerably.

Judging from shipments data, fresh potatoes moving by rail and motor carrier from Maine were up 17 percent over 1973/74.

Certified Seed

As an example of dwindled interest in production of potatoes this year, certified seed imports to the U.S. (Jan.-May) from Canada were down to a more usual figure of about 400,000 cwt. But in 1973-74, shortages prompted U.S. growers to bring in over 700,000 cwt, mostly from Prince Edward Island and New Brunswick provinces.

At the other end of the continent, however, the Washington State Potato Commission reported in late spring that crop certified for seed use and sold for 1975 plantings, in Washington totaled 6 percent more than 1974 deliveries. Explanation: expansion of irrigated potato acreage continues in Oregon and Washington State, in defiance of cyclical conditions to the contrary. So, this example of expanding seed sales—and presumed higher acreages—may run counter to lower acreages originally planned in key Idaho counties.

Manufacturing Capacity: Slower Gain in 1975

In sharp contrast to last year, fewer additions to freezing and dehydrating capacity will be coming on stream later this summer. At Washburn, Maine, one firm has slated an August startup of a new plant. This factory will take fresh raw product plus sizable tonnage of pieces remaining from frozen manufacturing in to a crop equivalent of 1.5 million cwt at full capacity. Flakes and granules will be produced.

A Pacific Northwest interest is building more freezing capacity in the Morrow-Umatilla area of Oregon. Nearby, more than 15,000 high-yielding potato acres have been opened in the last 2-3 years.

Finally, a national brand factor's unit is adding frozen potato product capacity at Ontario, Oregon. Investment there is reported at $7.5-million and will accomodate certain other frozen food specialities such as shaped onion products.

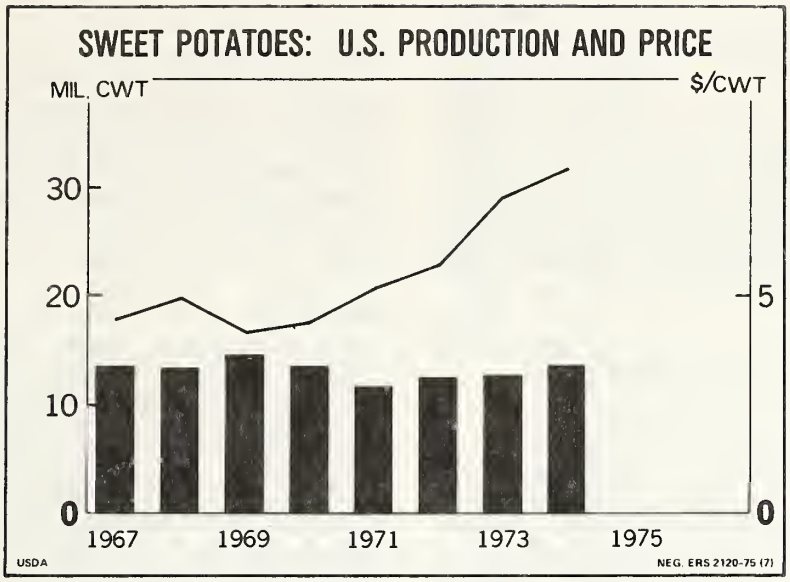
USDA Purchases

In Fiscal Year 1975, USDA Agricultural Marketing Service bought 1.6 million pounds of dehydrated potatoes at a cost of $379,000. No purchases were made the previous year.

For frozen french-fried potatoes, the Department purchased 30 million lbs at a total outlay of just over $6.0 million. This was done under Section 6 authority and represented vastly increased activity compared with FY74.

SWEETPOTATOES

As of early April near the close of the season, grower prices reported by the Agricultural Marketing Service were higher than a year earlier in California



and Louisiana. Since then only scattered reports were available. With the season ending on this rather strong note, U.S. growers reported planting 126,500 acres, 2 percent more than the year before, the most since 1970. The acreage for harvest could be 3 percent more. Under average yield conditions, a larger crop is to be expected. Most of the current expansion centers in North Carolina, with smaller additions from Tennessee, Mississippi, and California. Louisiana acreage is off substantially this season.

Canners' stocks of sweetpotatoes are currently the highest of record, more than 6 million cases on April 1. Going back to January 1 when comparable data are available, stocks were nearly twice as large as the previous season. This heavy supply on hand suggests that canning activity will be reduced this fall. If the larger crop materializes, downward pressure on grower prices may result.

MUSHROOMS

Mushroom prices to growers for processing stock were reported in June at mostly 40.5 cents per pound, compared with 35-37¢ during the peak canning period during the winter. Fresh prices in early June were last reported at 42¢ per pound for clean cut bulk stock for repacking. Supply levels are reduced in seasonal fashion during the summer months, and the price reports of the Pennsylvania Department of Agriculture will resume late in October.

Imports of canned mushrooms forthe period July 1974 through May 1975 totaled 45.5 million pounds, a slight gain from 42.8 million the comparable period a year earlier. Import volume during April and May was especially heavy this year, with this activity compensating for lighter shipments made to this country the last half of 1974.

Table 3—Sweetpotatoes: Acreage by States, United States

State and area	1973	1974	Indicated 1975[1]	1975 as percentage of 1974
	1,000 acres	*1,000 acres*	*1,000 acres*	*Percent*
New Jersey	1.6	1.8	2.0	111
Maryland	2.1	2.1	2.1	100
Virginia	7.4	7.4	7.0	95
Central Atlantic	11.1	11.3	11.1	98
North Carolina	25.0	27.0	32.0	119
South Carolina	2.0	2.5	2.3	92
Georgia	7.5	8.0	7.5	94
Lower Atlantic	34.5	37.5	41.8	111
Tennessee	3.2	3.0	5.0	167
Alabama	4.5	5.5	5.8	105
Mississippi	9.5	9.0	9.5	106
Arkansas	1.5	1.7	1.8	106
Louisiana	33.0	35.0	31.0	89
Texas	9.5	10.0	10.0	100
Central	61.2	64.2	63.1	98
California	6.4	6.7	7.2	107
United States	112.2	119.7	123.2	103

[1] Indicated as of June 30.

Data from Acreage, SRS, USDA, June 1975.

The domestic industry is still working to overcome the effects of canned product recalls. Fresh market movement has made some recovery, but trade reports still include comment on sluggish processed demand.

Mushroom growers and processors in the important southeast Pennsylvania area received substantial assistance in 1975 under the Small

Business Administration's Economic Opportunity Loan Program. A total face amount of $4,359,000 has been approved for 35 industry members. It should boost capacity of meeting updated product guidelines developed by cooperation of industry trade associations and the Food and Drug Administration.

SRS annual mushroom production summary for 1974/75 will be released August 20. Details and analysis of this report will be included in the October issue of the Vegetable Situation.

DRY EDIBLE BEANS

U.S. acreage for harvest of dry edible beans is 1.48 million acres, 6 percent lower than the abundant 1974 acreage. Dropoffs in Michigan, California, and Minnesota comprised all the nationwide acreage reduction. These States produce white bean classes, demand for which has been weak during 1974/75. Minor increases in acreage have occurred among colored bean-producing States.

Prices Firm to Higher

Bean prices moved out of the doldrums from spring to mid-summer, the result of downward adjustments in U.S. acreage compared with the season before. Throughout the 1974/75 marketing year, pinto exports were the exceptional performer, tending to bolster the overall U.S. grower price. At mid-July, the grower price—all classes and reporting States average in—stood at $19.80 per cwt. This was up from the April and May lows of around $17.00 but well below the $30-and-up prices 12 months earlier. Of course, dealer inventories stand at what could be record high levels in recent years. So the recent dry bean price strength depends on relatively heavy export activity plus a slight drop from 1974's generous yield per harvested acre. The 1974/75 estimated season's total dry bean exports will exceed 5 million cwts, nearly 60 percent more than a year earlier, for an all-time record.

By Classes—Navy Pea Beans

Navy pea beans, by production the most important class, fetched $16.00 per 100-lb. bag, f.o.b. dealers' platforms in Michigan, in July. In 1974, 6.9 million cwt of navies were produced nationwide. The fact that U.S. growers had to dispose of a 42 percent bigger navy crop kept their prices about 60-80 percent lower than the 1973/74 highs. And the cost of producing last year's crop was higher than any other year in which $10-$16 per cwt would have seemed an advantageous price. Result: Michigan (93 percent of pea beans nationwide) growers have trimmed 1975 all dry bean acreage indicated for harvest to 535,000 down 11 percent. This means in all likelihood, a crop of 5.8 million cwt, should 5-year average yields prevail. Of this, all but 700,000 bags would be of the pea bean class.

The outlook for navy beans is therefore brighter for producers this coming season, even with the volume of trade needs off somewhat. Wholesalers, retailers, and manufacturers will be working down beans "bought-ahead" when prices were lower. Bulging warehouses at the beginning of 1975/76 marketing will be a price depressant.

Pintos

Priced consistently higher per unit than navies throughout 1974/75, the pinto crop turned out to be of greater value to U.S. growers than any other class. Crop production in 1974 turned out less than what a 5-year average would have suggested. Plus, short supplies and subsidy of consumer staples in Mexico forced imports to there to skyrocket. At 9 months into the 1974/75 crop disposition, U.S. exports of pintos to Mexico stood at 1.42 million cwt. This was nearly a third of the total dry edible bean amount that the U.S. exported during that period.

Dealer prices, currently at a high $34.00 per cwt. f.o.b. shipping point, reflect razor-thin stocks. More pinto acreage is in prospect with Colorado dry bean plantings up 14 percent, Idaho up 7 percent, and Nebraska up 5 percent. Harvest potential for pintos in those States has probably grown apace with the larger area committed to dry beans, since dealer prices in 1974/75 would logically have prompted that grower response. North Dakota's acreage and harvest potential remain a question mark. Some pinto acreage in Traill and Grand Forks counties was damaged by early summer flooding.

However, price prospects for pinto prices are lower. A decline into low-and mid-$20 per cwt range could easily happen if Mexican demand tapers off. And Mexican demand *will* be down because internal crop support prices were raised last winter to 6 pesos/kg (US$34.03/cwt) for dry beans. That price was above the open market price in Colorado (plus transportation to Mexico) in winter 1975, and created additional enthusiasm among Mexican dry bean producers.

Great Northerns

Fortunes of this class deteriorated with most other white bean classes. There was 20 percent more this season to dispose of. Exports helped some, but February through June the value of 100 pounds of great northern beans stayed between $16.75 and $18.50. Recently, f.o.b. Idaho shipping points, this price has headed up along with other light bean classes. It rests now at $23.00. Although Algerian purchases provide a good foundation for great northern marketings, the fact that Idaho and Nebraska (combined, 95 percent of production) have more acreage for harvest in 1975 may work against maintenance of higher prices for this class.

California Classes

Large lima acreage in the Golden State is placed at 27,000 or 6,000 acres lower than 1974. But a sharper drop is expected for baby limas. California's acreage has been cwt to 18,000 36 percent under 1974's figure. In absolute terms, however, plantings for all other classes stood at 115,000 acres, down 51,000.

Naturally, over-generous inventories and unenthusiastic markets since mid-summer 1974 caused the cutbacks. California's output is concentrated in blackeyes, large limas, red kidneys, baby limas, small whites, and pinks. Per hundredweight, San Francisco and Los Angeles shipping points charged $20.75-$23.25 since last December for large limas; $13.50-$15.50 for baby limas. Blackeyes traded in a narrow $12.50-$15.50 per cwt range over the last 8 months, while red kidneys moved out from an early spring low of $25 to a summer high of $29 per 100-lb bag. Among the classes priced above, their values this season were 50 to 70 percent lower than the extra-short 1973/74 marketing year supplies.

Warehouse reports compiled by the California Bean Shippers Association showed June 1974 supplies on hand of all dry bean classes at 1.2 million cwt, almost double 12 months earlier. The source of all this upswing is among small whites from Watsonville to San Ardo, large and baby limas on the West Side San Joaquin Valley, and dark kidneys in the Stockton zone.

Retail Prices Down

June dry bean prices, reported by the Bureau of Labor Statistics, continued their steady drop that started 12 months earlier. Not since October 1973 has the price for a pound of beans (BLS surveys navy pea bean or great northern classes only) been so low. June's price: 35.8 cents/pound; a year earlier, it was 80.4 cents/pound. With a usual marketing margin, the retail price has finally reflected advantageous costs prevailing for intermediate users of most dry edible bean classes. Consumers were typically diffident about last year's high prices and next-toero availability of important classes. Certainly a turnaround in takeaway from supermarket shelves could occur—though this staple has a low profile for most households' menus—now that per pound prices are back to a familiar range and prices of meat and cheese are rising.

Also reflecting lower commodity costs at the retail location was the BLS-priced can of bean soup. In June 1975, it stayed at 26.7 cents for the 11½ ounce can, lower by 5 percent than late winter this year. Its retail price is now about the same as August 1974.

Government Activity

For the entire fiscal year ended June 30, 1975, USDA Agricultural Marketing Service bought 9.9 million lbs of dry beans, under authority of Sections 6 and 32. In FY 74, the Department acquired 38.2 million pounds, though under only Section 32.

This year there is no crop loan program for dry edible beans under the USDA Agricultural Stabilization and Conservation Service.

DRY EDIBLE PEAS

Current Situation

Acreage for harvest of dry peas, excluding wrinkled seed and Austrian winter peas, is set at 165,500 acres. Cutbacks in each of the commercially estimated States—Idado, Oregon, Washington—represented a decline from last year's harvest of 213,000 acres. Corrections of this magnitude were in order to account for a large carryover. Given average yields, supplies to both U.S. and external markets should be adequate for yet another marketing year.

Price Review

Greens hit their low of $7.10 per 100-lb bag, thresher run f.o.b. shipping point, in mid-February 1975. Only limited price advances have occurred since then. An $8.45 price was tops for beginning of summer. Last season, this and other dry pea varieties had largely been sold by early March.

Yellows touched their old winter 1973 price level of near $6.00 per cwt at the end of February this year. Recent f.o.b. from the Spokane, Washington, area: $8.15.

Blacks also touched a $6.00 per bag low in mid-winter and recently have not recovered as much. At early June, shippers were being paid just $6.95 per cwt, though this price was well above historic end-of-season values (1974 excepted).

Shipments Roundup

Exporters moved almost 60 percent more dry peas (including seed varieties) and lentils from the U.S. The figures cover September through May movement. When the season is finished, annual comparisons will turn out even higher since sharply abbreviated quantities were shipped April-August 1 year ago.

Table 4—Commercially produced vegetables: Civilian per capita consumption, averages 1947-49, 1957-59, and 1960 to date

Period	Fresh equivalent					As percentage of annual total			
	Total fresh and processed	Fresh[1]	Processed[2]			Fresh	Processed		
			Total	Canned	Frozen		Total	Canned	Frozen
	Pounds	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Percent*	*Percent*	*Percent*	*Percent*
1947-49	199.7	120.5	79.2	72.6	6.6	60.3	39.7	36.4	3.3
1957-59	199.7	104.1	95.6	81.1	14.5	52.1	47.9	40.6	7.3
Year									
1960	202.3	105.7	96.6	81.7	14.9	52.2	47.8	40.4	7.4
1961	199.8	103.7	96.1	81.3	14.8	51.9	48.1	40.7	7.4
1962	201.0	101.3	99.7	83.7	16.0	50.4	49.6	41.6	8.0
1963	201.5	101.2	100.3	84.9	15.4	50.2	49.8	42.1	7.7
1964	198.4	98.5	99.9	83.7	16.2	49.6	50.4	42.2	8.2
1965	201.0	98.3	102.7	85.3	17.4	48.9	51.1	42.4	8.7
1966	201.5	95.9	105.6	86.7	18.9	47.6	52.4	43.0	9.4
1967	209.4	98.2	111.2	91.3	19.9	46.9	53.1	43.6	9.5
1968	214.9	101.2	113.7	92.7	21.0	47.1	52.9	43.1	9.8
1969	212.1	97.9	114.2	94.9	19.3	46.2	53.8	44.7	9.1
1970	213.1	98.5	114.6	94.0	20.6	46.2	53.8	44.1	9.7
1971	213.0	99.2	113.8	93.6	20.2	46.6	53.4	43.9	9.5
1972	215.0	98.3	116.7	96.3	20.4	45.7	54.3	44.8	9.5
1973	223.7	100.2	123.5	101.6	21.9	44.8	55.2	45.4	9.8
1974[3]	220.4	101.1	119.3	98.4	20.9	45.9	54.1	44.6	9.5

[1] Includes dehydrated onions and excludes melons. [2] Data includes pickles and sauerkraut in bulk; excludes canned and frozen potatoes, canned sweetpotatoes, canned baby foods and canned soups. [3] Preliminary.

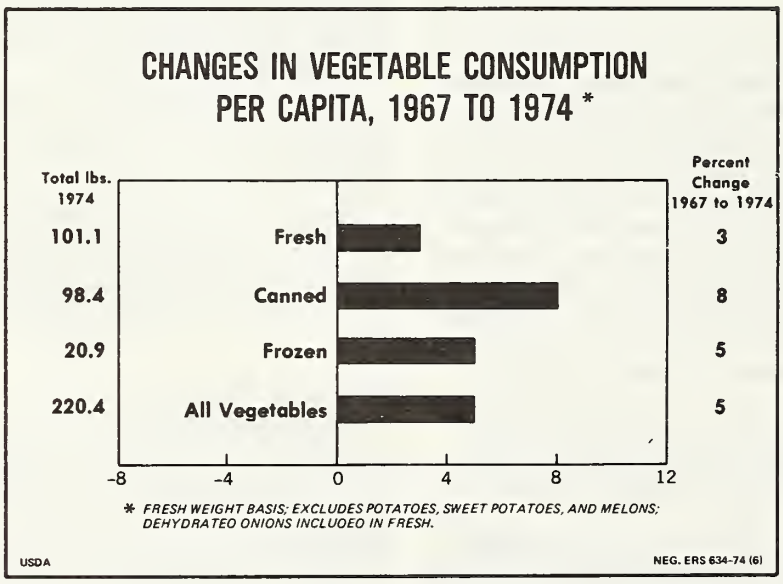
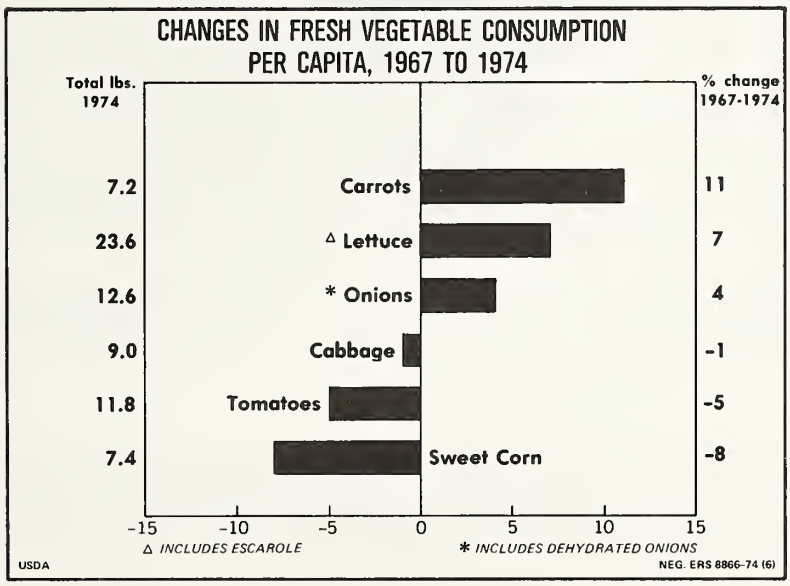
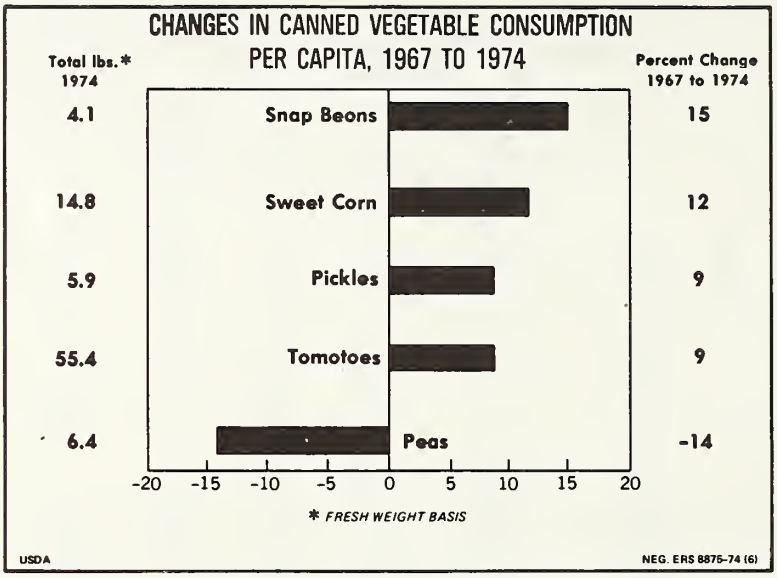


Table 5—Potatoes, sweetpotatoes, dry edible beans, and dry field peas: Per capita consumption, primary distribution weight, averages 1947-49, 1957-59 and annual 1960 to date[1]

Period	Potatoes[2]	Sweet-potatoes[3]	Dry edible beans[4]	Dry field peas[5]
	Pounds	*Pounds*	*Pounds*	*Pounds*
1947-49	114	13.0	6.7	0.6
1957-59	107	8.3	7.7	.6
Year				
1960	109	7.1	7.3	.6
1961	110	6.5	7.9	.3
1962	108	6.7	7.6	.8
1963	113	6.9	7.6	.7
1964	112	5.5	7.6	.5
1965	108	6.2	6.6	.4
1966	118	6.3	6.3	.4
1967	108	5.8	6.9	.2
1968	115	5.7	6.4	.3
1969	117	5.7	6.9	.3
1970	118	5.6	5.9	.3
1971	119	4.9	5.9	.3
1972	119	5.1	6.4	.3
1973	117	5.1	6.5	.5
1974[6]	116	5.6	6.9	.4

[1] Civilian consumption only. [2] Farm weight basis, calendar years. Includes farm garden produce but not nonfarm. Includes table-stock and processed potatoes. [3] Includes canned sweetpotatoes. [4] Cleaned basis, calendar years. [5] Cleaned basis, crop years beginning approximately September of year indicated. [6] Preliminary.




CHANGES IN CANNED VEGETABLE CONSUMPTION
PER CAPITA, 1967 TO 1974
Total lbs.* 1974
Percent Change 1967 to 1974
4.1
Snap Beans
15
14.8
Sweet Corn
12
5.9
Pickles
9
55.4
Tomatoes
9
6.4
Peas
-14
-20 -15 -10 -5 0 5 10 15 20
* FRESH WEIGHT BASIS
USDA
NEG. ERS 8875-74 (6)

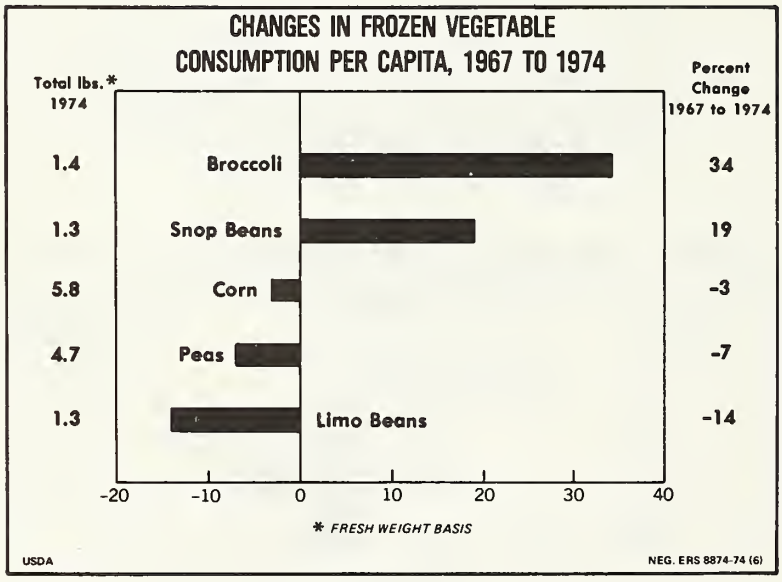

CHANGES IN FROZEN VEGETABLE
CONSUMPTION PER CAPITA, 1967 TO 1974
Total lbs.* 1974
Percent Change 1967 to 1974
1.4
Broccoli
34
1.3
Snap Beans
19
5.8
Corn
-3
4.7
Peas
-7
1.3
Lima Beans
-14
-20 -10 0 10 20 30 40
* FRESH WEIGHT BASIS
USDA
NEG. ERS 8874-74 (6)

Table 6—Civilian per capita consumption of selected commercially produced fresh and processed vegetables[1]
United States, calendar years 1957-74

Commodity	Fresh equivalent basis																	
	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974[2]
	Pounds	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*
Asparagus																		
Fresh	.80	.80	.70	.70	.60	.60	.60	.50	.60	.40	.40	.50	.40	.50	.50	.50	.50	.40
Canned	1.00	.98	.97	.88	.92	.96	.83	.88	.90	.83	.80	.87	.83	.81	.73	.70	.84	.62
Frozen	.31	.29	.38	.40	.30	.34	.30	.33	.28	.30	.32	.30	.28	.28	.24	.19	.21	.19
Beans, lima[3]																		
Fresh	.30	.30	.30	.40	.30	.30	.30	.30	.30	.30	.30	---	---	---	---	---	---	---
Canned	.69	.61	.60	.57	.56	.55	.55	.52	.43	.31	.43	.46	.52	.54	.50	.44	.44	.42
Frozen	1.59	1.58	1.51	1.57	1.45	.151	1.50	1.52	1.45	1.47	1.53	1.56	1.33	1.50	1.35	1.45	1.46	1.32
Beans, snap																		
Fresh	2.90	2.60	2.50	2.60	2.50	2.30	2.20	2.10	2.00	1.90	2.00	1.90	1.80	1.70	1.60	1.70	1.60	1.50
Canned	2.82	3.03	2.99	2.99	3.01	3.17	3.06	3.27	3.31	3.50	3.54	3.76	3.91	3.98	4.01	3.99	4.03	4.06
Frozen	.91	.97	.98	.92	.87	.97	1.04	.99	1.07	1.24	1.07	1.18	1.14	1.24	1.22	1.26	1.34	1.27
Broccoli																		
Fresh	.50	.40	.40	.40	.40	.30	.40	.30	.30	.30	.30	.40	.30	.40	.40	.40	.50	.60
Frozen	.67	.74	.78	.84	.78	.83	.79	.88	.90	.95	1.03	1.05	1.11	1.10	1.19	1.32	1.41	1.38
Cabbage																		
Fresh	10.90	10.80	10.10	10.30	9.70	9.80	9.70	9.50	8.90	8.90	9.10	9.30	9.00	8.70	9.20	8.80	8.90	9.00
Canned[4]	2.14	2.34	2.20	2.20	2.22	2.23	2.17	1.96	2.23	2.21	2.23	2.56	2.30	2.37	2.47	2.19	2.19	2.37
Corn[5]																		
Fresh	7.70	8.40	8.80	8.50	8.40	8.30	8.20	7.80	8.10	7.40	8.00	7.80	7.20	7.20	7.50	7.80	7.80	7.40
Canned	13.51	13.47	12.68	13.20	12.32	13.64	13.78	13.85	13.54	12.95	13.22	14.19	15.08	14.66	15.18	15.98	15.79	14.84
Frozen	2.41	2.77	2.68	2.49	2.69	3.22	3.31	3.60	4.19	4.64	5.93	5.87	5.35	5.96	5.41	5.41	5.88	5.78
Cucumbers																		
Fresh	3.10	2.80	2.60	2.90	3.00	2.80	3.10	3.00	3.10	3.00	3.10	2.90	3.10	3.20	3.10	3.10	3.10	3.30
Canned[6]	3.87	4.04	3.96	3.78	3.99	4.41	4.40	4.61	4.62	4.95	5.42	5.74	5.76	5.50	5.65	5.83	5.93	5.89
Peas, green[3]																		
Fresh	.30	.30	.30	.30	.30	.30	.20	.30	.20	.20	.10	---	---	---	---	---	---	---
Canned	8.23	8.16	8.57	7.76	7.85	7.39	7.40	7.38	7.44	7.58	7.39	7.56	7.49	7.06	6.86	6.87	7.71	6.35
Frozen	4.42	4.57	4.45	4.83	4.50	5.03	4.87	4.91	5.40	5.58	5.10	5.66	4.86	5.04	4.92	4.92	4.80	4.74
Spinach																		
Fresh	1.00	1.10	1.00	.90	.80	.70	.70	.60	.60	.60	.60	.60	.40	.30	.50	.50	.50	.40
Canned	.80	.84	.85	.78	.71	.79	.70	.63	.64	.55	.57	.65	.47	.62	.58	.65	.73	.69
Frozen	.91	.93	1.01	.88	.89	.85	.83	.88	.89	.98	1.00	1.00	.96	.97	1.04	1.03	.96	1.13
Tomatoes																		
Fresh	12.60	11.90	12.80	12.60	12.60	12.70	12.00	12.20	12.00	12.40	12.40	11.90	11.70	12.20	11.40	11.90	12.50	11.80
Canned[7]	41.71	42.34	42.80	43.69	44.25	44.98	46.46	44.98	45.91	47.59	51.00	50.42	51.30	51.30	50.39	51.96	56.17	55.42

[1] Data for processed vegetables excludes quantities consumed in commercially produced soups, and baby boods and in canned wholesale mixtures such as peas and carrots and succotash. [2] Preliminary. [3] "In pod" basis. [4] Sauerkraut, canned and bulk. [5] "On-cob" basis. [6] Pickles, canned and bulk. [7] Including canned whole tomatoes and tomato products other than soup.

Table 7—Fresh vegetables and melons, commercial: Per capita consumption, farm weight, averages 1947-49, 1957-59, and 1962 to date[1]

Period	Vegetables															
	Leafy, green and yellow															
	Tomatoes	Artichokes	Asparagus	Lima beans (unshelled)	Snap beans	Broccoli	Brussels sprouts	Cabbage	Carrots	Kale	Lettuce and escarole	Green peas (unshelled)	Peppers	Spinach	Minor	Total
	Pounds	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*
1947-49	13.8	.2	1.0	.6	4.1	.9	.2	16.1	8.8	.2	18.6	.9	2.1	1.9	6.3	61.9
1957-59	12.4	.2	.8	.3	2.7	.4	.1	10.6	7.3	.2	20.3	.3	2.2	1.0	5.2	51.6
Year																
1962	12.7	.2	.6	.3	2.3	.3	.1	9.8	7.0	.1	20.5	.3	2.3	.7	5.3	49.8
1963	12.0	.2	.6	.3	2.2	.4	.1	9.7	7.3	.1	21.4	.2	2.5	.7	5.1	50.8
1964	12.2	.3	.5	.3	2.1	.3	.1	9.5	6.9	.1	21.0	.3	2.3	.6	4.9	49.2
1965	12.0	.3	.6	.3	2.0	.3	.1	8.9	7.0	.1	21.7	.2	2.3	.6	4.6	49.0
1966	12.4	.3	.4	.3	1.9	.3	(2)	8.9	6.4	.1	21.6	.2	2.4	.6	4.0	47.4
1967	12.4	.4	.4	.3	2.0	.3	.1	9.1	6.5	.1	22.1	.1	2.6	.6	3.6	48.2
1968	11.9	.3	.5	(3)	1.9	.4	(2)	9.3	7.5	(3)	22.5	(3)	2.8	.6	5.5	51.3
1969	11.7	.3	.4	(3)	1.8	.3	(2)	9.0	6.8	(3)	22.1	(3)	2.6	.4	4.7	48.4
1970	12.2	.3	.5	(3)	1.7	.4	(2)	8.7	6.6	(3)	22.8	(3)	2.4	.3	5.0	48.7
1971	11.4	.4	.5	(3)	1.6	.4	(2)	9.2	7.2	(3)	23.2	(3)	2.6	.5	4.7	50.3
1972	11.9	.3	.5	(3)	1.7	.4	(2)	8.8	6.5	(3)	23.2	(3)	2.6	.5	4.6	49.1
1973	12.6	.3	.5	(3)	1.6	.5	(2)	8.9	6.7	(3)	23.9	(3)	2.8	.5	4.1	49.8
1974[4]	11.8	.3	.4	(3)	1.5	.6	(2)	9.0	7.2	(3)	23.6	(3)	2.8	.4	4.2	50.0

Period	Vegetables											Melons			Total vegetables and melons	Dehydrated onions
	Other										Total vegetables	Water melons	Cantaloups	Total melons		
	Beets	Cauliflower[5]	Celery	Corn	Cucumbers	Egg plant	Garlic	Onions and[6] shallots[7]	Minor	Total						
	Pounds	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*
1947-49d	1.3	3.3	8.2	8.0	2.6	.4	.2	12.0	8.8	44.8	120.5	17.8	9.6	27.4	147.9	
1957-59	.7	1.3	8.0	8.3	2.8	.4	.3	11.7	6.6	40.1	104.1	16.9	8.2	25.1	129.2	
Year																
1962	.6	1.2	7.2	8.3	2.8	.4	.2	11.7	6.4	38.8	101.3	14.6	8.5	23.1	124.4	
1963	.5	1.1	6.9	8.2	3.1	.4	.3	11.9	6.0	38.4	101.2	15.9	8.7	24.6	125.8	
1964	.5	1.0	6.8	7.8	3.0	.4	.4	11.4	5.9	37.2	98.6	14.8	8.2	23.0	121.6	
1965	.5	1.0	6.7	8.1	3.1	.4	.4	11.4	5.7	37.3	98.3	15.7	7.9	23.6	121.9	
1966	.4	1.0	6.9	7.4	3.0	.4	.3	11.5	5.2	36.1	95.9	14.8	7.3	22.1	118.0	
1967	.4	1.0	6.8	8.0	3.1	.4	.4	12.1	5.4	37.6	98.2	14.2	8.1	22.3	120.5	
1968	(3)	1.0	7.2	7.8	2.9	.4	.5	11.9	6.3	38.0	101.2	14.4	8.6	23.0	124.2	
1969	(3)	.9	7.2	7.2	3.1	.4	.5	12.4	6.1	37.8	97.9	13.7	9.0	22.7	120.6	
1970	(3)	.8	7.1	7.2	3.2	.4	.5	12.4	6.0	37.6	98.5	14.4	8.9	23.3	121.8	
1971	(3)	.8	7.3	7.5	3.1	.4	.3	9.8	5.8	35.0	96.7	14.1	8.5	22.6	119.3	2.5
1972	(3)	.8	7.2	7.8	3.1	.5	.4	9.8	5.7	35.3	96.3	13.2	8.7	21.9	118.2	2.0
1973	(3)	.8	7.6	7.8	3.1	.6	.5	9.2	5.8	35.4	97.8	13.8	7.9	21.7	119.5	2.4
1974[4]	(3)	.8	7.2	7.4	3.3	.5	.7	10.8	5.8	36.5	98.3	12.0	7.0	19.0	117.3	2.8

[1] Excludes quantities produced in home gardens. [2] Less than 0.05 pound. [3] Included in minor vegetables. [4] Preliminary. [5] Close trim basis since 1954; slight trim basis in prior years. [6] Includes 0.1 pound of shallots each year through 1958; 1959 through 1967 less than 0.05 pound; since 1968, included in minor vegetables. [7] Excludes dehydrated onions beginning 1971.

Table 8—Canned vegetables: Per capita consumption, processed weight, averages 1947-49, 1957-59 and annual 1962 to date[1]

Period	Leafy, green and yellow vegetables								Tomato products					Other vegetables					
	Asparagus	Lima beans	Snap beans	Carrots	Peas	Pumpkin and squash	Spinach	Whole tomatoes	Catsup and chili-sauce	Paste and sauce	Pulp and puree	Tomato and other vegetable juices[2]	Beets	Corn	Pickles	Sauerkraut	Sweetpotatoes	Other[3]	Total
	Pounds	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*
1947-49 ..	.6	.4	2.8	.4	5.7	.6	1.1	4.3	2.5	2.4	.9	4.2	1.1	5.2	3.3	1.8	.4	1.4	39.1
1957-59 ..	.8	.4	4.1	.5	4.8	.6	1.0	4.6	3.5	3.4	.7	5.0	1.4	5.3	4.5	1.6	1.0	1.6	44.8
Year																			
1962 ...	.8	.4	4.5	.6	4.1	.6	1.0	4.6	4.1	[4]3.9	.8	4.7	1.4	5.5	5.6	1.4	1.3	1.6	46.9
1963 ...	.7	.4	4.4	.6	4.1	.5	.9	4.6	4.3	[4]4.0	.8	5.4	1.5	5.6	5.7	1.4	1.1	1.5	47.5
1964 ...	.7	.4	4.8	.6	4.1	.6	.8	4.5	4.6	[4]3.9	.8	4.5	1.4	5.6	6.2	1.2	1.0	1.5	47.2
1965 ...	.8	.3	4.8	.6	4.1	.5	.8	4.5	5.0	[4]3.9	.8	4.7	1.4	5.5	6.2	1.4	1.3	2.1	48.7
1966 ...	.7	.2	5.1	.7	4.2	.5	.7	4.6	4.8	[4]4.2	1.0	4.4	1.4	5.2	6.6	1.4	1.2	2.1	49.0
1967 ...	.7	.4	5.1	.7	4.1	.5	.7	4.6	4.7	[4]5.0	1.0	4.2	1.4	5.4	7.3	1.4	1.1	2.3	50.6
1968 ...	.7	.3	5.5	.6	4.2	.6	.8	4.9	[5]9.8		1.1	4.0	1.3	5.8	7.7	1.6	1.3	2.1	52.3
1969 ...	.7	.4	5.7	.6	4.1	.5	.6	4.9	[5]10.1		1.0	4.1	1.5	6.1	7.7	1.4	1.5	2.8	53.7
1970 ...	.7	.4	5.8	.6	3.9	.5	.8	4.8	[5]10.1		1.0	4.1	1.5	5.9	7.4	1.5	1.2	2.7	52.9
1971 ...	.6	.4	5.9	.6	3.8	.5	.7	4.9	[5]9.9		1.0	3.9	1.4	6.2	7.6	1.6	1.2	4.1	54.3
1972 ...	.6	.3	5.8	.8	3.8	.6	.8	5.1	[5]10.2		1.1	3.7	1.5	6.5	7.8	1.4	1.1	4.1	55.2
1973 ...	.7	.3	5.9	.6	4.3	.6	.9	5.8	[5]11.3		1.1	3.3	1.3	6.4	8.0	1.4	1.3	4.5	57.7
1974[6] ..	.5	.3	5.9	.6	3.5	.6	.9	5.0	[5]11.3		1.2	3.6	1.3	6.0	7.9	1.5	1.4	4.8	56.3

[1] Excludes soups and baby food. Civilian consumption only. [2] Based on information available for 1944-46, tomato juice comprises approximately 85 percent of the total, combination vegetable juices 13 percent, and other vegetable juices 2 percent. Combination vegetable juice contains approximately 70 percent or more tomato juice. [3] Includes miscellaneous greens, pimentos, potatoes, mixed vegetables, and all items, especially in earlier years, for which no separate data are available. [4] Estimated. [5] Estimate combines paste, sauce, catsup and chili sauce. [6] Preliminary.

Table 9—Vegetables, frozen: Per capita consumption, processed weight, averages 1947-49, 1957-59 and annual 1962 to date[1]

Period	Leafy, green and yellow vegetables											Other vegetables					Potato products	Total[3]
	Asparagus	Snap beans	Lima beans	Carrots	Peas	Peas and carrots	Pumpkin and squash	Broccoli	Brussels sprouts	Spinach	Other[2]	Cauliflower	Corn, cut basis	Succotash	Onions	Rhubarb		
	Pounds	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*
1947-49 ...	.13	.28	.42	.07	.82	.05	.05	.16	.08	.27	.10	.08	.23	.04	([4])	.04	.04	2.86
1957-59 ...	.17	.77	.71	.26	1.61	.12	.10	.55	.19	.57	.61	.17	.65	.06	([4])	.03	1.56	8.13
Year																		
1962	.18	.81	.71	.39	1.84	([4])	.07	.62	.20	.56	.97	.22	.85	([4])	([4])	.03	3.82	11.27
1963	.16	.87	.70	.34	1.78	([4])	.06	.60	.20	.57	.80	.19	.88	([4])	([4])	.03	4.43	11.61
1964	.17	.84	.72	.42	1.81	([4])	.07	.66	.22	.62	.88	.20	.97	([4])	([4])	.03	5.86	13.47
1965	.15	.91	.69	.51	1.98	([4])	.07	.68	.22	.62	.89	.20	1.13	([4])	([4])	.03	5.72	13.80
1966	.16	1.06	.70	.55	2.05	([4])	.10	.71	.20	.68	1.08	.25	1.26	([4])	([4])	.03	6.93	15.76
1967	.17	.90	.73	.66	1.88	([4])	.10	.77	.20	.70	1.07	.25	1.60	([4])	([4])	.03	7.58	16.64
1968	.16	1.00	.74	.73	2.08	([4])	.12	.79	.18	.70	1.12	.26	1.59	([4])	.16	.03	8.50	18.16
1969	.15	.97	.63	.72	1.78	([4])	.13	.84	.23	.67	1.02	.30	1.44	([4])	.18	.04	9.84	18.94
1970	.14	1.05	.71	.76	1.86	([4])	.13	.83	.22	.68	1.07	.30	1.61	([4])	.25	.04	11.10	20.75
1971	.12	1.04	.64	.74	1.81	([4])	.14	.90	.22	.73	1.18	.35	1.47	([4])	.34	.04	12.12	21.84
1972	.10	1.07	.69	.81	1.81	([4])	.10	.99	.20	.72	1.12	.35	1.46	([4])	.51	.04	12.25	22.22
1973	.11	1.14	.69	.99	1.76	([4])	.16	1.06	.23	.67	1.32	.37	1.60	([4])	.53	.06	13.27	23.96
1974[5]	.10	1.07	.63	1.00	1.74	([4])	.10	1.04	.26	.78	.96	.41	1.56	([4])	.49	.06	13.21	23.41

[1] Civilian consumption only. [2] Included with leafy, green, and yellow because most items included are considered to be green. [3] Computed from unrounded data. [4] Includes with "other". [5] Preliminary.

Table 10—Potatoes, Irish: Acreage, yield per acre, and production, annual 1973, 1974, and indicated 1975

Season group	Acreage			Yield per acre			Production		
	Harvested		For harvest						
	1973	1974[1]	1975	1973	1974[1]	Indicated 1975	1973	1974[1]	Indicated 1975
	1,000 acres	*1,000 acres*	*1,000 acres*	*Cwt.*	*Cwt.*	*Cwt.*	*Million cwt.*	*Million cwt.*	*Million cwt.*
Winter	14.0	13.7	14.6	204	214	203	2.9	2.9	3.0
Spring	98.9	99.8	80.5	214	243	219	21.2	24.3	17.6
Summer	125.1	132.1	119.8	172	191	182	21.5	25.2	21.8
Total with production to date	238.0	245.6	214.9	192	213	197	45.6	52.4	42.4

[1] Revised.

Crop production, SRS, USDA, issued monthly.

Table 11—Vegetables, fresh: Representative prices[1] for stock of generally good quality and condition (U.S. when available), New York, Chicago, and shipping point, indicated periods, 1974 and 1975

Market and commodity	State of origin	Unit	Tuesday					
			1974			1975		
			May 14	June 11	July 16	May 13	June 10	July 15
			Dollars	*Dollars*	*Dollars*	*Dollars*	*Dollars*	*Dollars*
New York:								
Beans, snap, green	New Jersey	Bu. basket	---	---	4.50	---	11.00	8.00
Broccoli	California	14-bchs., crt. & ctn.	5.50	6.00	5.75	5.25	4.75	4.75
Cabbage								
Domestic, round type	New Jersey	Various used crates	---	3.75	2.25	---	6.75	2.00
Cantaloups	California	36's jumbo crt.	---	16.00	16.00	---	---	14.00
Carrots, topped, washed	California	48-1 lb. film bag ctn.	6.00	7.25	7.25	8.75	7.50	7.25
Cauliflower	California	Carton 12's	7.00	6.50	8.00	9.00	6.50	8.50
Celery								
Pascal	California	2-3 doz., crt.	10.00	8.50	9.00	8.50	10.00	10.00
Lettuce, Iceberg	California	2 doz., ctn.	6.75	6.75	5.75	5.50	6.00	5.875
Spinach, Savoy	New Jersey	Bu. basket	3.75	3.75	---	2.75	2.50	---
Tomatoes	Ohio	8 lb. bskt., med.	4.00	4.00	3.00	4.00	5.00	4.00
Chicago:								
Broccoli	California	14's crt. & ctn.	5.50	5.75	6.00	5.35	4.75	5.00
Cabbage								
Domestic, round type	Illinois	Various used crates	---	---	3.25	---	---	2.15
Cantaloups	California	36's jumbo crt.	---	18.00	---	---	---	13.50
Carrots, topped, washed	California	48-1 lb. film bag, ctn.	7.00	6.75	7.00	8.40	7.75	7.15
Cauliflower	California	Film wrpd., ctns, 12's	5.25	5.25	8.00	8.75	---	7.00
Celery								
Pascal	California	2-3 doz., crt.	10.00	8.75	8.75	7.75	9.00	9.50
Pascal	Michigan	2-4 doz., crt.	---	---	7.00	---	---	7.00
Cucumbers	Illinois	Bu. basket	---	---	8.00	---	---	5.00
Honeydews	California	2/3-flat crt. 5-8's	---	---	5.75	---	---	6.50
Lettuce, Iceberg	California	2 doz. heads, ctn.	5.50	6.75	5.50	5.25	5.50	5.25
Spinach, flat type	Illionis	Bu. basket	4.00	5.25	---	3.00	3.25	6.50
Tomatoes	Illionis	10-lb. baskt., med-lge.	---	---	2.00	---	---	3.75
			Week ended					
			1974			1975		
			May 11	June 15	July 13	May 10	June 14	July 12
			Dollars	*Dollars*	*Dollars*	*Dollars*	*Dollars*	*Dollars*
Shipping point:								
Onions, medium	Texas	50 lb. sack Grano	2.20	2.14	2.65	4.75	5.75	9.70
Onions, medium	California	50 lb. sack	2.40	2.06	---	4.50	5.25	---
Watermelons	Florida	25 lb. av. and larger per cwt.	7.20	3.71	3.50	5.84	5.58	4.12

Source: Market News Report, AMS, U.S.D.A.

Table 12—Fresh Vegetables: Retail price, marketing margin, and grower and packer return per unit, sold in New York City, indicated months, 1974 & 1975

Commodity, month, and retail unit	Retail price	Marketing margin		Grower and packer return (Fob shipping point prices[1], [2]	
		Absolute	Percentage of retail price	Absolute	Percentage of retail price
	Cents	*Cents*	*Percent*	*Cents*	*Percent*
Carrots (lb.)					
May 1975	30.3	16.3	54	14.0	46
April 1975	30.4	16.4	54	14.0	46
May 1974	21.3	12.8	60	8.5	40
Celery (lb.)					
May 1975	25.0	17.5	70	7.5	30
April 1975	24.0	18.9	79	5.1	21
May 1974	24.7	17.0	69	7.7	31
Corn sweet (doz. ears)					
May 1975	209.7	129.6	62	80.1	38
April 1975	235.3	143.8	61	91.5	39
May 1974	177.6	109.0	61	68.6	39
Cucumbers (lb.)					
May 1975	29.1	17.9	62	11.2	38
April 1975	50.2	23.2	46	27.0	54
May 1974	38.3	19.4	51	18.9	49
Lettuce (head)					
May 1975	43.7	35.5	81	8.2	19
April 1975	40.6	31.6	78	9.0	22
May 1974	55.2	31.5	57	23.7	43
Onions, dry yellow (lb.)					
May 1975	30.0	21.9	73	8.1	27
April 1975	18.7	7.3	39	11.4	61
May 1974	19.7	15.2	77	4.5	23
Peppers, green (lb.)					
May 1975	52.8	24.5	46	28.3	54
April 1975	59.0	41.8	71	17.2	29
May 1974	61.0	28.8	47	32.2	53
Tomatoes, vine-ripe (lb.)					
May 1975	62.8	30.5	49	32.3	51
April 1975	66.7	34.4	52	32.3	48
May 1974	77.4	28.4	37	49.0	63

[1] For quantity of product equivalent to retail unit sold to consumers; Because of waste and spoilage during marketing, equivalent quantity exceeds retail unit. [2] Production areas: Carrots-CALIFORNIA, Celery-CALIFORNIA, Corn-FLORIDA, Cucumbers-FLORIDA, Lettuce-CALIFORNIA, Onions-TEXAS, Peppers-FLORIDA, Tomatoes-FLORIDA.

Table 13—Fresh vegetables: Representative truck rates for selected fresh vegetables, Jan.-June 1974-75[1]

Commodity, area and city	1974						1975					
	Jan.	Feb.	Mar.	Apr.	May	June	Jan.	Feb.	Mar.	Apr.	May	June
	Dollars per package											
Cabbage (wirebound crate)												
Southern Florida To:												
Atlanta	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
Chicago	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75
New York City	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65
Rio Grande Valley, Tex. To:												
Chicago	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45
New York City	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30
Carrots (48/1 lb. film)												
Imperial Valley, Calif. To:												
Chicago	1.50	1.50	1.50	1.50	---	---	1.50	1.68	1.68	1.68	---	---
New York City	2.12	2.50	2.25	2.25	---	---	2.25	2.50	2.50	2.50	---	---
Seattle	1.05	1.12	1.12	1.05	---	---	1.05	1.12	1.12	1.12	---	---
Rio Grande Valley, Tex. To:												
Chicago	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35
New York City	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15
Celery (wirebound crate)												
Southern California To:												
Chicago	2.00	2.00	2.05	2.05	2.35	2.35	2.35	2.35	2.10	2.10	2.10	2.10
New York City	3.00	3.00	3.10	3.10	3.10	3.10	3.30	3.30	2.90	2.90	2.90	2.90
Southern Florida To:												
Atlanta	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
Chicago	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75
New York City	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65
Corn (wirebound crate)												
Southern Florida To:												
Chicago	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45
Los Angeles	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90
New York City	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35
Lettuce (24 head ctn.)												
Imperial Valley, Calif. To:												
Atlanta	1.50	1.75	1.50	1.50	---	---	1.64	1.75	1.75	1.75	---	---
Chicago	1.50	1.75	1.50	1.50	---	---	1.50	1.69	1.69	1.69	---	---
New York City	2.12	2.50	2.50	2.50	---	---	2.25	2.50	2.50	2.50	---	---
Onions, dry (50-lb. sack)												
Western and Central New York To:												
Boston	.40	.45	.50	.50	---	---	.55	.55	.55	.55	---	---
New York City	.40	.40	.45	.45	---	---	.50	.50	.50	.50	---	---
Potatoes (100-lb. sack)												
Idaho Fall, Idaho To:												
Atlanta	2.65	2.65	2.65	2.65	---	---	3.25	3.25	3.25	3.25	---	---
Chicago	2.18	2.18	2.18	2.18	---	---	2.25	2.25	2.25	2.25	---	---
Los Angeles	1.22	1.22	1.22	1.22	---	---	1.20	1.20	1.20	1.20	---	---
New York City	3.25	3.25	3.25	3.25	---	---	3.75	3.75	3.75	3.75	---	---
Yakima, Wash. To:												
Atlanta	2.85	3.05	3.05	3.05	---	---	3.25	3.50	3.50	3.50	---	---
Chicago	2.32	2.50	2.50	2.50	---	---	3.00	3.00	3.00	3.00	---	---
Los Angeles	1.30	1.42	1.42	1.50	---	---	1.40	1.40	1.40	1.40	---	---
New York City	3.10	3.78	3.80	3.80	---	---	4.25	4.00	4.00	4.00	---	---
Presque Isle, Maine To:												
Boston	.80	.80	.80	.80	.80	.80	.80	.80	.80	.80	.80	.80
New York City	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
Western and Central New York To:												
Atlanta	1.20	1.20	1.25	1.30	1.30	---	1.35	1.35	1.35	1.35	1.35	---
Boston	.75	.75	.90	1.00	1.00	---	1.05	1.05	1.05	1.05	1.05	---
New York	.75	.75	.90	.90	.90	---	.95	.95	.95	.95	.95	---

[1] Reported from a sample of shippers and/or truck brokers in specified areas for shipments during first week of month.

Table 14—Canned vegetables: Commercial pack and canners' seasonal supply, shipments to latest month; and total seasonal shipments, selected commodities

Commodity and season	Carryover	Pack	Seasonal supply	Latest month shipments	Total seasonal shipments
	Million cases 24/303's	*Million cases 24/303's*	*Million cases 24/303's*	*Million cases 24/303's*	*Million cases 24/303's*
Asparagus					
1971-72	.9	5.5	6.4	[1] 2.1	5.5
1972-73	.9	5.9	6.8	[1] 2.8	5.3
1973-74	1.5	5.8	7.3	[1] 3.1	6.1
1974-75	1.2	5.6	6.8	[1] 1.8	4.4
1975-76	2.4	N.A.	N.A.	N.A.	N.A.
Beans, lima					
1971-72	.7	3.1	3.8	[2] 2.6	3.1
1972-73	.7	2.1	2.8	[2] 2.3	2.7
1973-74	.1	3.2	3.3	[2] 2.5	3.1
1974-75	.2	2.5	2.7	[3] 2.2	N.A.
Beans, snap					
1971-72	8.0	50.0	58.0	[3] 50.2	52.1
1972-73	5.9	47.6	53.5	[3] 49.7	50.8
1973-74	2.7	55.0	57.7	[3] 51.4	52.5
1974-75	5.2	62.3	67.5	[3] 52.1	N.A.
Beets					
1971-72	3.5	10.2	13.7	[4] 9.1	11.5
1972-73	2.2	9.4	11.6	[4] 9.6	10.7
1973-74	.9	11.3	12.2	[4] 10.2	11.3
1974-75	.9	14.8	15.7	[4] 9.9	N.A.
Carrots					
1971-72	2.4	5.7	8.1	[4] 5.2	6.2
1972-73	1.9	5.1	7.0	[4] 5.6	6.0
1973-74	1.0	6.2	7.2	[4] 4.9	5.0
1974-75	2.2	7.2	9.4	[4] 4.9	N.A.
Corn, sweet					
1971-72	9.4	53.8	63.2	[3] 51.1	54.0
1972-73	9.2	53.0	62.2	[3] 52.6	55.9
1973-74	6.3	55.2	61.5	[3] 54.6	57.6
1974-75	3.9	46.4	50.3	[3] 42.6	N.A.
Peas, green					
1971-72	4.3	33.2	37.5	[3] 32.6	32.6
1972-73	4.9	33.1	38.0	[3] 34.4	34.4
1973-74	3.6	29.6	33.2	[3] 31.7	31.7
1974-75	1.5	33.1	34.6	[3] 30.1	N.A.

[1] August 1. [2] May 1. [3] June 1. [4] April 1.

National Canners Association.

Table 15—Vegetables, frozen: United States commercial packs 1973 and 1974, and cold storage holdings, July 1, with comparisons

Commodity	Packs		Cold storage holdings		
	1973	1974	July 1, 1973	July 1, 1974	July 1, 1975[1]
	Million pounds	*Million pounds*	*Million pounds*	*Million pounds*	*Million pounds*
Asparagus	20	16	33	23	19
Beans, lima:					
Fordhook	52	46	12	11	14
Baby	98	97	16	21	35
Total	150	143	28	32	49
Beans, snap:					
Regular cut	178	161	38	49	69
French cut	80	70	24	26	27
Wax	9	7	([3])	([3])	([3])
Total	267	238	62	75	96
Broccoli	213	245	59	100	98
Brussels sprouts	57	54	20	21	20
Carrots	232	248	40	84	90
Cauliflower	96	94	10	25	34
Corn, cut	294	298	41	58	76
Corn-on-cob	167	152	26	26	22
Mixed vegetables	([3])	([3])	19	29	32
Onions	115	111	11	25	20
Peas	388	417	116	133	157
Peas and carrots	([3])	([3])	8	9	10
Pumpkin and squash	29	33	([3])	([3])	([3])
Rhubarb	13	7	([3])	([3])	([3])
Spinach	160	178	100	127	113
Kale	4	5	([3])	([3])	([3])
Okra	41	43	6	20	15
Peas, blackeye	42	31	4	7	9
Turnip greens	19	11	([3])	([3])	([3])
Miscellaneous vegetables	160	164	150	174	170
Total	2,467	2,488	733	968	1,030
French fried potatoes	2,320	2,542	417	433	755
Other frozen potatoes	371	443	93	111	133
Total frozen potatoes	2,691	2,985	510	544	888
Grand total	5,158	5,473	1,243	1,512	1,918

[1] Preliminary. [2] Considered as repacks and not included in total. [3] Included in miscellaneous vegetables. n.a. - not available.

Pack data from American Frozen Food Institute. Stocks from Cold Storage Report, SRS, USDA, issued monthly.

Table 16—Vegetables for processing: Planted acreage, annual 1973, 1974, and indicated 1975[1]

Crop	Planted acreage			
	1973	1974	Contract 1975	1975 as percentage of 1974
	1,000 acres	*1,000 acres*	*1,000 acres*	*Percent*
For freezing:				
Green lima beans	53	52	52	100
Snap beans	78	67	55	82
Sweet corn	134	132	126	95
Green peas	159	165	157	95
For canning:				
Green lima beans	29	28	30	107
Snap beans	232	254	225	89
Sweet corn	355	380	385	101
Green peas	276	298	305	102

[1] 1975 production for canning and freezing will be published in December annual summary.

Vegetables-Processing, SRS, USDA, issued monthly.

Table 17—Potatoes: Prices f.o.b. shipping points and wholesale price at New York and Chicago, U.S. No. 1 indicated periods 1974 and 1975

Item	State	Week ended					
		1974			1975		
		May 18	June 15	July 13	May 17	June 14	July 12
		Dollars per 100 lb. sack	*Dollars per 100 lb. sack*	*Dollars per 100 lb. sack*	*Dollars per 100 lb. sack*	*Dollars per 100 lb. sack*	*Dollars per 100 lb. sack*
F.o.b. shipping points							
Kern County							
Long Whites	California	12.00	7.25	4.95	5.75	7.70	7.95
Hi Plains-Panhandle Dist.							
Round Reds	Texas	---	---	5.95	---	---	---
Southern points							
Rounds Reds	Alabama	12.50	8.00	[1] 5.85	4.58	---	[1] 10.00
Round Whites	Virginia	---	---	5.45	---	---	10.00
		Tuesday nearest mid-month					
		1974			1975		
		May 14	June 18	July 16	May 13	June 17	July 15
		Dollars per 50 lb. sack	*Dollars per 50 lb. sack*	*Dollars per 50 lb. sack*	*Dollars per 50 lb. sack*	*Dollars per 50 lb. sack*	*Dollars per 50 lbs. sack*
Terminal markets							
New York							
Long Whites	California	---	6.35	5.50	---	6.25	6.85
Katahdin, 2" min.	Maine	7.35	5.75	---	2.40	5.65	---
		Dollars per 100 lb. sack	*Dollars per 100 lb. sack*	*Dollars per 100 lb. sack*	*Dollars per 100 lb. sack*	*Dollars per 100 lb. sack*	*Dollars per 100 lb. sack*
Chicago							
Long Whites	California	16.00	11.50	8.50	---	12.50	12.75

[1] Northeast points.

F.o.b. prices are the simple averages of the mid-point of the range of daily prices. Market prices are for Tuesday of each week, and are submitted by Market News representatives to the Fruit and Vegetable Division of AMS.

Table 18—Sweetpotatoes: Representative wholesale price (wholesale lots) at New York and Chicago for stocks of generally good merchantable quality and condition (U.S. No. 1, when available) indicated periods, 1974 and 1975

Item	State	Tuesday nearest mid-month					
		1974			1975		
		May 14	June 18	July 16	May 13	June 17	July 15
		Dollars per 50 lb. container	*Dollars per 50 lb. container*	*Dollars per 50 lb. container*	*Dollars per 50 lb. container*	*Dollars per 50 lb. container*	*Dollars per 50 lb. container*
Terminal markets							
New York							
Porto Rico	North Carolina	7.50	7.50	7.25	13.25	---	10.00
Chicago							
Porto Rico, cured	Louisiana	8.00	---	---	---	---	---

Prices submitted for Tuesday of each week by the Market News representative at New York and Chicago.

Table 19—Beans, dry edible: Acreage, yield per acre, and production, annual 1973, 1974, and indicated 1975[1]

Group State and classes	Acreage			Production[2]		
	Harvested		For harvest			
	1973	1974	1975	1973	1974	Indicated 1975
	1,000 acres	*1,000 acres*	*1,000 acres*	*1,000 cwt.*	*1,000 cwt.*	*1,000 cwt.*
Michigan	560	600	535	5,320	7,200	([5])
New York	39	42	44	371	517	([5])
Northwest[3]	389	486	503	6,303	7,143	([5])
Southwest[4]	211	204	224	1,604	1,814	([5])
California:						
Large lima	31	33	27	533	670	([5])
Baby lima	20	28	18	378	574	([5])
Other	110	166	115	1,797	2,747	([5])
Total California	161	227	160	2,708	3,991	([5])
Other States	8	11	12	83	140	([5])
United States	1,398	1,570	1,478	16,389	20,805	([5])

[1] Includes beans grown for seed. [2] Cleaned basis. [3] Nebraska, Montana, Idaho, Wyoming, Washington, Minnesota, and North Dakota. [4] Kansas, Colorado, New Mexico, and Utah. [5] Available in August Crop Production.

Table 20—Peas, dry field: Acreage, planted and harvested, annual 1973, 1974, and acreage for harvest 1975[1]

State	Acreage					
	Planted			Harvested		
	1973	1974	1975	1973	1974	For harvest 1975
	1,000 acres	*1,000 acres*	*1,000 acres*	*1,000 acres*	*1,000 acres*	*1,000 acres*
Minnesota	8.0	2.0	---	4.0	1.0	---
Idaho	50.0	90.0	63.0	48.0	89.0	62.0
Washington	85.0	122.0	105.0	81.0	117.0	100.0
Oregon	3.6	6.0	3.5	3.4	6.0	3.5
United States	146.6	220.0	171.5	136.4	213.0	165.5

[1] Excludes peas grown for seed.

Acreage, SRS, USDA.

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THE AMERICAN VEGETABLE INDUSTRY IN THE 1970'S

by

Charles W. Porter, Agricultural Economist
Commodity Economics Division, ERS

ABSTRACT: Per capita use of vegetables continues to gain during the 1970's, with the shift from fresh to processed use about run its course. Further gains in processed use are likely while fresh consumption per capita has stabilized. In the processing and wholesaling sector of the market, the trend to fewer but larger firms continues. The shift in supply sources has continued into the 1970's, as the degree of specialization in States like California and Florida has intensified. In the absence of economic legislation of social pressure to the contrary, the U.S. vegetable industry will become more tightly molded, and many existing institutional arrangements will become more formal.

KEY WORDS: Vegetables, fresh vegetables, canned vegetables, frozen vegetables, per capita consumption, demand, new processing techniques, supply sources, specialization, imports.

Trends in Demand

In some respects, the pace of change within the U.S. vegetable industry has slowed, while in other areas the rapid tempo continues largely unabated. Population growth, and consequently the size of the market, now grows more slowly; the shift from fresh to processed vegetables has slowed markedly; but the per capita use of all vegetables is still registering good gains in the 1970's.

On the supply side of the market, the change has been rapid in market structure and firm size. The trend toward fewer but larger firms continues both in processing and wholesaling. In some sectors, like concentrated tomato products, the food industry now depends largely upon only a handful of suppliers. Sources of supply have changed considerably, too. In an attempt to focus on these changes in the industry, and put them in perspective, this article will review current trends, and make projections of future demand for fresh, canned and frozen vegetables between now and 1980.

Recent Changes in Demand

Demand for all vegetables (omitting potatoes from this article) strengthened during the early 1970's as canned vegetable use per person rose moderately, while fresh and frozen held generally steady or slightly higher compared with most years of the late 1960's. Most of the gain in canned use came in concentrated tomato products, tomatoes, snap beans, and in pickles. There have been no major changes in fresh vegetables use thus far in the 1970's. Comparing the middle 1960's with 1973 and 1974, we note that fresh tomato, sweet corn, snap bean, and cauliflower use was slightly higher in the earlier period. Offsetting these changes were small increases in the use of lettuce, peppers, cucumbers, garlic, and eggplant.

Frozen vegetable use per person at 21-22 pounds annually has gained for onions, carrots, and broccoli, while frozen peas and lima beans have lost a little ground since the mid-1960's. There has been practically no change in snap beans and sweet corn. Since 1970, the frozen vegetable market has seen rapid development such specialties as green beans with slivered almonds, and sweet corn in butter sauce. The appeal has been to the luxury trade, but total frozen vegetable pack trends in recent years have done little more than match population growth.

Especially in 1974, the processed vegetable industry was hit hard by rapidly rising raw product, labor, rent, interest, energy, and transport costs. With higher costs and only slightly larger supplies, prices rose sharply, and per capita use slackened, at least temporarily. Renewed interest in home gardening

Trends in consumption per capita for selected fresh vegetables

Year	Lettuce[1]	Tomatoes	Onions[2]	Cabbage	Carrots	Cucumbers	Peppers	Celery	Total 8 items	Total all Vegetable[2]
	Pounds	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*
1947-49 Av. .	18.6	13.8	12.0	16.1	8.8	2.6	2.1	8.2	82.2	120.5
1957-59 Av. .	20.3	12.4	11.7	10.6	7.3	2.8	2.2	8.0	75.3	104.1
1965	21.7	12.0	11.4	8.9	7.0	3.1	2.3	6.7	73.1	98.3
1970	22.8	12.2	12.4	8.7	6.6	3.2	2.4	7.1	75.4	98.5
1973	23.9	12.6	11.6	8.9	6.7	3.1	2.8	7.6	77.2	100.2
1974	23.6	11.8	13.6	9.0	7.2	3.3	2.8	7.2	78.5	101.1

[1]Includes escarole. [2]Includes 2.4 pounds of dehydrated onions for 1973, 2.8 pounds for 1974, and estimated 2.3 pounds for 1970.

has been a response to higher prices—though the extent of this activity is difficult to measure. These rising production costs are likely to stimulate new interest in further commercial application of different processing techniques. This will be discussed later in this article.

Fresh and Processed Vegetable Prices Rose Rapidly, But at Different Times

Retail prices for fresh vegetables advanced considerably between 1970 and 1973 while processed prices under price ceiling restrictions, moved up much less in comparison. The sharp rise in processed fruit and vegetable prices came a year later. Had processed vegetable supplies been more ample at the time, it is doubtful whether this strong and upward price movement would have taken place. With a larger 1974 pack, and with reduced demand, the more generous supply picture the first half of 1975 checked upward price pressures. In addition, there has been a substantial measure of consumer resistance to high prices.

Retail price indexes for fresh and processed fruits and vegetables, 1962-64 average and selected years[1]
(1967=100)

Year	Fresh	Canned and frozen
1962-64 average	90.7	98.2
1965	97.9	98.3
1970	116.3	109.2
1973	150.8	130.2
1974	162.6	170.6
1975-6 months	162.9	177.2

[1] Food consumed at home.

Bureau of Labor Statistics.

Canned Vegetable Use Moved Up

Between 1968 and 1973 retail prices for canned vegetables held relatively low compared to fresh. These relative price differences may have helped to push canned movement temporarily above the long-term slowly rising trend in per capita use of processed vegetables. Recently, many trade observers have felt that the market for canned vegetables was fairly well saturated and that further increases in sales would come only from population gains. But in the latter half of 1973 and early 1974, when retail food prices moved up markedly, many households increased use of concentrated tomato products by serving budget stretching casseroles, rice, and pasta dishes. However, most of the increased use of tomato products came from the institutional markets. Tomatoes and tomato products account for more than half the total use of canned vegetables (fresh weight basis). Looking to the future, the per capita use of canned vegetables is expected to more up further to 104 pounds by 1980.

A Small Plus in Total Vegetable Use Per Capita Expected

Future per capita use of vegetables in all forms in projected to increase slightly between now and 1980. The importance of vegetables in the American diet is well established, and is reflected in the current high rate of consumption. In the past, vegetable use per capita has increased along with gains in personal income. As the growth of consumption expenditures resumes, vegetable use may be expected to increase. Also, a larger share of the population seems favorably inclined to vegetable use. These two elements, rising and more secure incomes, along with the interest of a larger segment of the population, are the main props to continued heavy vegetable use in the next five years.

Frozen vegetable use (exclusive of frozen potato products) reached a record 22 pounds per capita in 1973. Preliminary data for 1974 suggest a return to earlier slightly lower levels. It is likely this resulted from consumer resistance to sharply higher prices for the 1974 pack. A large share of the frozen vegetable pack is subsequently repacked into a wide variety of specialties which command substantial premiums in frozen food departments. These products have been hit hard in the current business recession. As business recovers these products should again enjoy more consumer favor, and by 1980, a further gain to about 24 pounds per capita may be expected.

Trends in per capita consumption of fresh, canned, and frozen vegetables[1]
(Fresh weight basis)

Period	Fresh[2]	Canned	Frozen	Total
	Pounds	*Pounds*	*Pounds*	*Pounds*
1947-49 average	121	72	7	200
1957-59 average	104	81	15	200
1965	98	85	18	201
1970	98	94	21	213
1973	100	102	22	224
1974	101	98	21	220
1980 projected	97	104	24	225

[1] Excludes melons and potatoes. [2] Includes 2.4 pounds of dehydrated onions for 1973, 2.8 pounds for 1974, and estimated 2.3 pounds for 1970.

Use of fresh, canned, and frozen vegetables[1]
(Fresh weight basis)

Period	Fresh[2]	Canned	Frozen	Total
	Million pounds	*Million pounds*	*Million pounds*	*Million pounds*
1947-49 average	17,489	10,521	963	28,973
1957-59 average	17,847	13,908	2,493	34,248
1965	18,835	16,320	3,336	38,491
1970	19,871	18,946	4,148	42,965
1973	20,842	21,130	4,549	46,521
1974	21,212	20,636	4,379	46,227
1980 projected	21,379	22,811	5,246	49,436

[1] Excludes melons and potatoes. [2] Includes dehydrated onions.

Fresh Use Stabilized

Fresh vegetable use per person seems to have stabilized after a long slow decline, which really reflected the shift to more convenient processed forms of cooking vegetables. By the early 1970's most, but not all, of this shift had taken place. Any further decline would be centered in sweet corn and snap veans, about the only two vegetables left which are purchased in large quantities in the fresh form but which must be cooked to use. Any futher decline in the use of fresh market greens, squash, or some root crops probably would not be steep enough to offset the growing popularity of salad vegetables. Also, onion use may move further to the processed forms in the next few years. The net effect of these observations would imply that the projected 1980 fresh market vegetable use per capita of 97 pounds represents only a slight decline from present levels.

More Volume Needed in 1980

With per capita use following the trends previously outlined, the projected civilian use of all vegetables (fresh, canned, and frozen) would likely increase by about 6 percent between 1973 and 1980. This assumes an annual population growth rate of 0.6-0.7 percent[1], equal to that of the past 3 years (Series III). It also assumes a moderate further gain in imports projected at a slower rate than what actually occurred in the late 1960's and early 1970's. Export levels were also assumed to increase at a more rapid rate than imports, but would still be sharply less than imports in both 1980 and 1985. Under a slightly larger rate of population growth (Series II) between now and 1980, total vegetable use is projected to be 7½ percent more than 1973.

It was also assumed there would always be adequate land available to meet any increased demand for vegetables and that real incomes would resume their rising trend long before 1980.

Comparing these estimates with past projections in a previous *Vegetable Situation* article, (August 1970) we note that canned vegetable use expanded more than was thought likely, fresh use held up better, and frozen vegetable use has yet to reach the point suggested by earlier projections.

How Technology May Influence Vegetable Use

Several recent developments could have a marked effect on vegetable consumption trends in the next few years. These include handling and package standardization problems associated with the fresh vegetable industry. Some changes in processing technology may be expected to stimulate demand for certain vegetable products in forms unlike those in common use today.

In the next few years, the fresh vegetable industry must overcome some serious handling problems, which add greatly to marketing costs. These problems relate to package standardization which would permit easy, rapid, and economical handling. The problem is basic-a wide variety of perishable items of different shapes and sizes has to be adapted to a standard size pallet, more uniform packages, and the use of Universal Product Codes (UPC). For packaged goods, the problem has been resolved. But the added expense of adapting some fresh fruits and vegetables to the UPC system may work against the cost and availability of certain items. The fresh market vegetable industry faces a stiff challenge in maintaining the future marketability of some crops, particularly squash, snap beans, cauliflower, broccoli, to name a few. Some believe that packaging at the source is the only answer, but thus far, losses, poor appearance or spoilage are high enough to discourage maximum consumer pruchases. In most instances, in-store packaging has proved inconvenient and too expensive. Without further technological breakthroughs, it is likely that only the hardiest of vegetables will be adaptable at a low cost to standardization, utilization and UPC. UPC would also favor packaging on a weight, rather than a unit

[1] *Current Population Reports*, Population Estimates and Projections. Bureau of the Census, Series P-25, No. 541, Feb. 1975, p. 7.

basis, with different codes for each weight range. These added marketing costs and the resulting inconvenience will tend to work against any expended use of fresh vegetables.

Appraising Different Vegetable Processing Techniques

On the vegetable processing side, the manufacture and use of dehydrated vegetables is likely to become somewhat more prominent between now and 1985. Dehydrated potato, garlic, and onion products have been available for several years, and since 1970 a few additional companies have begun to manufacture a complete line of dried vegetable specialities.

There are limited Census of Manufactures data on dehydrated vegetable output, but trade sources estimate that Americans now consume about 2.8 pounds of dried onions per person per year. Aside from potatoes, this would be the most popular dehydrated vegetable item, perhaps due to some readily obvious characteristics associated with preparation and use of this universally used vegetable. A substantial share of the U.S. garlic crop is also sold in the dried form.

Other than for these items previously mentioned, commercial vegetable dehydration is confined to three or four companies which make a variety of vegetable flakes and powers. These are currently used in specialty foods processing, and will probably find moderately increased favor in the future. For example, there could be increased use of dried celery as a flavor enhancer. Secondary processors, like dried soup mix packagers, who store and use large quantities of raw ingredients would look with interest to vegetable products which require no expensive freezer storage or special handling.

Dried vegetables fit nicely with the newest trends in food processing and institutional preparation and distribution. But to most of the food buying public, the dried product does not have quality comparable to the canned or frozen form. Unless transport rates rise prohibitively the next few years (raising the cost of canned and frozen products), consumer acceptance of dehydrated vegetables in place of other forms is expected to be slow.

Aseptic "Barrelling": A New Processing Technique

After substantial research effort spanning 15 years, a large cooperative in California has made successful commercial runs of aseptically quick-processed bits of peaches, apples, pears, and tomatoes packed into 55-gallon drums. This process involves rapid heating and cooling of the product, thereby avoiding much of the loss of natural color associated with retort cooking. Furthermore, this process comes closer to retaining natural colors than other conventional methods, including freezing. This particular process will be limited to acid fruits and tomatoes for several years to come. This technique presently cannot safely be used with sub-acid vegetables like corn, snap beans, or peas. Aseptic barrelling of tomato paste should expand considerably the next few years.

A Recent Breakthrough in Freeze-Drying

Freeze-drying of vegetables, the process which combines these two preservation methods, has been known and used for several years. A recent breakthrough in the use of this method makes continous processing possible which will reduce costs. [2]Before now, the buildup of ice within the system allowed only for batch process operation, and the associated high costs limited food product sales to special uses—military rations, camper foods, soup mixes, and coffee. Powders or crystals for fruit juices may be the next large market for this process, and expanded outlets for existing products may result when per unit processing costs are reduced.

Supply Changes

West Dominates Fresh Vegetable Output

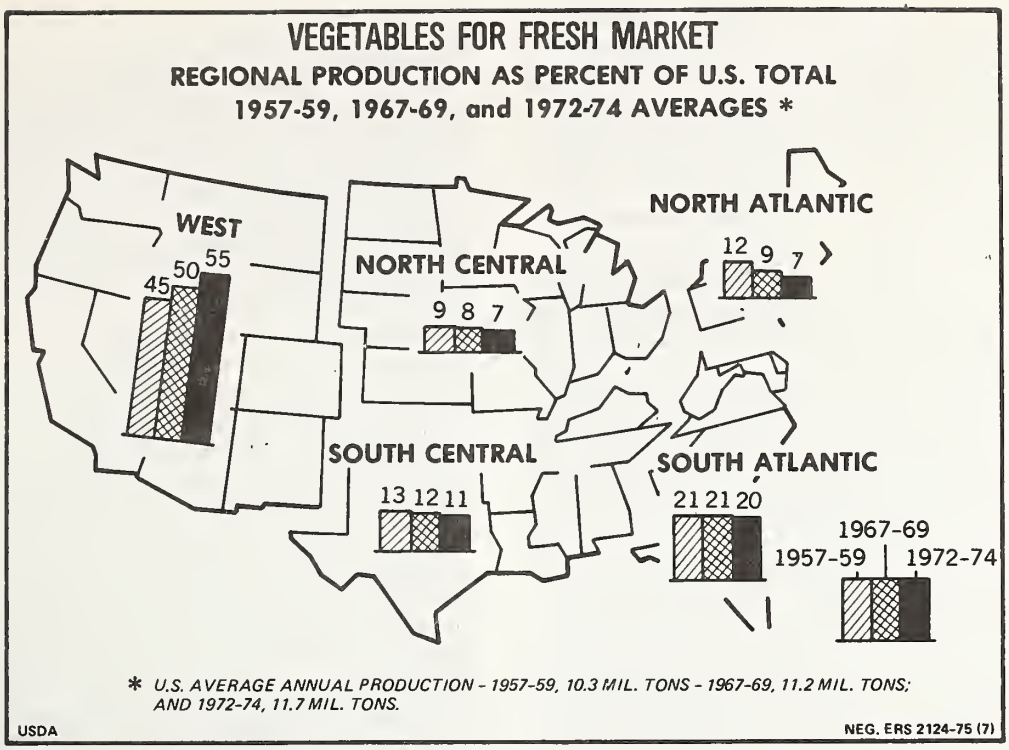
The westward shift of fresh vegetable production which marked the 1960's has continued into the 1970's as well. Fifty-five percent of all fresh vegetable output (excluding potatoes) now originates in the Rocky Mountain and Pacific Coast regions, California predominating, followed by Arizona. This is up from the 1967-69 period when exactly half of the U.S. output came from these two regions. All other sections of the country contributed declining shares of the total output, with the North Atlantic region slipping 2 percentage points in its share of total vegetable production.

Within each region some important shifts are taking place, too. California increased its share of the West's total and now accounts for 78 percent of all western fresh market vegetable production. This has come largely at the expense of Arizona which now contributes 9 percent of western output, down from 12 percent in the 1967-69 period. Oregon, a distant third in importance in the West, has maintained its 4-percent share. California growers have worked to extend their shipping seasons for some vegetable crops like lettuce, cabbage, and broccoli. The resulting competition has been partly responsible for declining Arizona output.

Few States Specialize in Fresh Vegetables

After the West, the South Atlantic region now accounts for a fifth of U.S. vegetable output and

[2]"New Freeze Drying Method Permits Continuous Food Processing;" *Production/Mangement*, December 1974, p. 22.



Florida alone accounts for almost three-fourths of output from this region, up from 69 percent in 1967-69. Florida's production increased slightly though total output for the region dropped 4 percent. The Delmarva Peninsula, South Carolina, and Georgia all lost ground, and North Carolina was the only important State in the South Atlantic region to hold its own in vegetable production. In a similar fashion, Texas and Michigan also have increased fresh vegetable production in their regions, each gaining a larger share of the output in their section of the country.

In the North Atlantic States, the situation is different. The major producer, New York, has not been able to maintain its share of output for the region. The Empire State's share of regional output dropped from 54 to 52 percent of the total. This was partly the result of the disastrous 1972 season, but only partial recovery of production since then has yet to equal the volume of the late 1960's. It may never do so. In New Jersey, fresh vegetable production continued its long-term slow decline, but its share of regional production actually moved up to 29 percent in the 1972-74 period. It should also be noted that in this region, farm labor costs are higher than most other areas, and a combination of urbanization and tax pressures on land are as severe as anywhere in the country.

Generally speaking, further specialization and concentration of fresh vegetable production in more restricted areas has taken place in the past 6 to 8 years in the United States. If 1974 Census data for the period were available, it would probably show fewer operations dealing with vegetables—both on the growing and marketing sides. California, Florida, Michigan, and Texas, already the important producers, seem destined to continue to provide large shares of our fresh market vegetables. New York, Arizona, and perhaps New Jersey are major States feeling the competitive squeeze brought on by lower production costs elsewhere. The newly emphasized trend toward growing-your-own and picking-your-own, plus other forms of direct marketing, while important in certain local areas of the Northeast, has yet to make a sizable dent in Statewide production statistics. This activity takes place almost entirely in the summer. In contrast, States like California, Arizona, Florida, and Texas contribute vegetable supplies for 9 months of the year, or even longer in California. Local single season production cannot be counted on to provide a large share of national requirements as long as most consumers expect a year-round supply of fresh vegetables.

Import Growth Slowing Down

During the latter 1960's, imports from Mexico of fresh vegetables, mainly tomatoes, grew rapidly. Gains also occurred between 1970 and 1973. The American public now depends extensively on Mexico as a major winter and spring supply source for tomatoes, cucumbers, peppers, and melons, with onions also shipped in quantity whenever domestic storage stocks are light. Competition between Florida and Mexico produce has grown keen, particularly for

tomatoes. To meet this intensified competition Florida growers have switched to packing mature green tomatoes, adopted improved varieties, and used improved cultural techniques such as plastic mulch. Except for Dade County where rocky soil prevents the use of stakes, growers also have shifted away from ground culture to more stake-grown plants. Most recently they have experimented with trickle irrigation systems which some growers feel will improve both quality and yield of this stake-grown fruit. A constant, but not excessive, water supply is reported to insure maximum yields and improved fruit size.[3]

In the 1973/74 season, Mexico had a decided advantage over Florida in production costs—86¢ versus $2.40 per 30 lb. carton. But the difference was practically offset by Mexico's higher cost of marketing, in getting its tomatoes harvested, packed, and exported to the United States.

The total cost for Florida mature greens at the shipping point was $4.86 compared with $4.64 for Mexican vine ripened fruit f.o.b. Nogales, Arizona.[4] This difference is not enough to give either production area an exclusive advantage, since Florida is nearer to more than half the U.S. population. Since these costs were calculated, the Mexican basic wage rate has risen more sharply than the U.S. Should this trend continue, it is likely that the Mexican industry will be responding in a manner similar to Florida industry.

Fresh vegetables-U.S. imports from Mexico

Vegetables	1967-69 average	1973	1974
	1,000 cwt.	*1,000 cwt.*	*1,000 cwt.*
Cucumbers	760	1,665	1,679
Onions	544	1,241	903
Peppers	310	884	866
Tomatoes	3,987	7,491	5,906
Other	744	1,635	1,728
Total	6,345	12,916	11,082

Looking ahead to 1980, it is probable that both areas will be supplying tomatoes to winter and spring markets, though one cannot be definite about relative prices or market shares. With the greater chances of destructive frosts in south Florida, the weather advantage would favor the Mexican industry. Therefore, it is probable that in some future years imports could rise above the record 745 million pounds for October 1, 1972-September 30, 1973. Shipments in both the 1973/74 and 1974/75 seasons fell below the earlier record.

For peppers and cucumbers, comparable observations may be made. Mexican production costs have been less than those for Florida. But higher marketing costs for Mexican-grown peppers resulted in a cost advantage only slightly in Mexico's favor in 1973/74.[5] Cucumber production and marketing costs favored Florida by a 23¢ per bushel margin that same year. But Mexico retains a dominant role in the winter cucumber supply by virtue of its climate advantage.[6] For all three vegetables, tariffs account for some of the higher Mexican marketing cost—56¢ per 30 lbs. tomato carton, 70¢ per bushel of peppers, and $1.40 per bushel of cucumbers.

In appraising the role of imports in the future, the answer may be as much a political as an economic decision. The tariff pattern could be altered further to favor one area over the other. Due to inflation, the relative impact of the duty has lessened. But based on current levels of technology and present marketing practices, Mexico could also shift more to the mature greens as well as move to cost-saving and yield-increasing production practices. New areas of production in Mexico may be developed too. With the U.S. demand for salad vegetables expected to continue strong, Florida and Mexico are likely to still be competing against each other 5 and 10 years hence, with the possibility of little change in market shares from the present levels.

The prospect of trade with Cuba could mean competition for Mexico and Florida. Even if this occurs, it is not likely that Cuba could rapidly gear up to supply any large volume to American markets in the first 1 or 2 seasons after trade is initiated. Although Cuba supplied American markets in the 1950's, plant disease problems were serious. In order to resume production, these problems must be controlled, some new variety choices must be tested, and several different new production practices may need to be considered and tried. All these questions are not likely to be resolved overnight and it probably would take a few seasons for Cuba to attain large-scale export tonnage, to the U.S. when and if trade resumes.

Domestic Supply Sources and Use of Selected Vegetables

More Specialization in States Like Florida and California

In checking domestic supply sources for most fresh vegetables, the pattern of change was determined several years ago. Since 1970 the degree of specialization already attained in States like California, Florida, and Texas has merely intensified.

[3]"A Closer Look at Trickle Irrigation," *American Vegetable Grower*, June 1975, p. 44.

[4]Pearson, James L. "Costs and Factors Affecting Production of Fresh Tomatoes, Peppers, and Cucumbers in Florida and West Mexico for U.S. Markets." *Vegetable* Situation, ERS-USDA, Nov. 1974, p. 21.

[5]Pearson op cit. p. 22.

[6]Ibid.

Lettuce

Heavy demand for salad vegetables is centered in the lettuce trade. Average annual output continues to rise as the accompanying table shows. California dominates the picture. Supplies from this one State are on the market year round. Although the crop is still grown commercially in New York, New Jersey, Texas, and Florida, seven eighths of the U.S. supply in 1974 came from Arizona and California. Per capita use continues to gain slowly for this basic salad item.

Fresh Market Sweet Corn

Total U.S. sweet corn production for fresh market has held steady in recent years, signifying declining fresh use per capita, and a continuing switch to canned and frozen forms. Nonetheless, fresh sweet corn from summer producing States is still important, and Florida has continued to increase its spring crop substantially in recent years. Florida, by producing in winter, spring, and fall seasons, accounted for 39 percent of the national output in 1974. A third of the total came from a continuous belt of States east of Michigan and Ohio through New York, Pennsylvania, and New Jersey. The balance came from California and a group of other States which produce primarily for local market outlets. While the Florida share of the total has been growing, this has not been at the expense of these nearby producers. Even though Florida is adding to the total supply of fresh corn, per capita use has been easing down in recent years. Several minor summer producing States have been planting enough less to keep U.S. output steady.

Fresh Market Tomatoes

Domestic fresh market tomato production has become even more concentrated in California and Florida since the 1967-69 period. Last year these two States accounted for 70 percent of the U.S. total. Aside from limited spring production from South Carolina and Texas, the rest of the annual output is comprised of locally marketed summer crops in the northern States. This represents about a fifth of the commercial tonnage each year.

Domestic production has held steady since the late 1950's. Imports from Mexico have helped maintain per capita consumption levels by making more fruit available during the first half of the year in recent years. Imports made up 9 percent of the supply in the 1957-59 period, 18 percent in 1967-69, 27 percent in 1973, and 22 percent in 1974. The decline in domestic production has been in the spring and summer seasons.

Lettuce: Production in leading States

State	Production			Percent of U.S. total		
	1957-59 average	1967-69 average	1974	1957-59 average	1967-69 average	1974
	1,000 cwt.	*1,000 cwt.*	*1,000 cwt.*	*Percent*	*Percent*	*Percent*
California	20,297	28,031	36,443	58	64	71
Arizona	8,566	8,647	8,593	25	20	17
Other States	5,806	7,316	6,358	17	17	12
[1] Total U.S.	34,669	43,994	51,394	100	100	100

[1] May not add due to rounding.

Sweet corn, fresh: Production in leading States

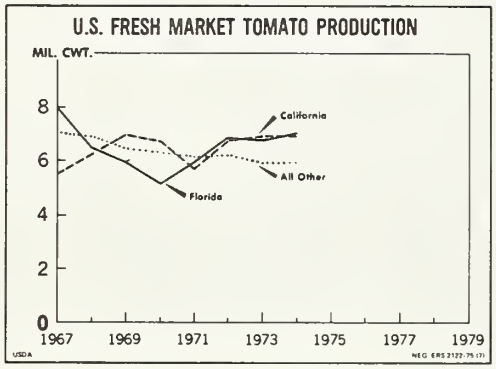
State	Production			Percent of U.S. total		
	1957-59 average	1967-69 average	1974	1957-59 average	1967-69 average	1974
	1,000 cwt.	*1,000 cwt.*	*1,000 cwt.*	*Percent*	*Percent*	*Percent*
Florida	2,930	4,319	5,107	24	33	39
New York	1,108	1,132	1,165	9	9	9
California	1,503	867	922	12	7	7
Ohio	940	946	910	7	7	7
New Jersey	988	855	774	8	7	6
Michigan	704	848	617	6	7	5
Pennsylvania	853	680	660	7	5	5
Other States	3,406	3,313	2,845	27	26	22
[1] Total U.S.	12,432	12,960	13,000	100	100	100

[1] May not add due to rounding.

Tomatoes, fresh: Production in leading States

State	Production			Percent of U.S. total		
	1957-59 average	1967-69 average	1974	1957-59 average	1967-69 average	1974
	1,000 cwt.	*1,000 cwt.*	*1,000 cwt.*	*Percent*	*Percent*	*Percent*
Florida	4,469	6,797	7,038	23	34	35
California	6,520	6,193	6,932	34	31	35
South Carolina	375	714	552	2	4	3
New Jersey	747	636	576	4	3	3
Texas	1,462	458	374	8	2	2
Alabama	267	435	559	1	2	3
Other States	5,507	4,516	3,908	28	23	20
[1] Total U.S.	19,347	19,749	19,939	100	100	100

[1] May not add due to rounding.



Cabbage

Because cabbage is a bulky product and because it can be grown under a wide range of field conditions, requires a relatively short growing season, and is easily handled, the crop tends to be more widely grown than most other important vegetables. The leading producers in 1974 were Florida, New York, Texas, and California, with Wisconsin, North Carolina, and Michigan also furnishing moderate supplies. These States do not all compete with each other for markets because each one has its own harvest season. In addition, the Great Lakes States from New York westward produce substantial quantities of Kraut cabbage.

Cabbage use per capita declined during the 1960's, but thus far in the 1970's fresh consumption use has stabilized at about 9 pounds per person annually. Its use in the fast food business undoubtedly has helped to check the earlier decline. Along with the sharply higher vegetable prices of recent years, cabbage still maintains its postion as an economical vegetable choice.

Onions

California has become the largest onion producer in the United States, but more than half the crop in that State is dehydrated with the balance used for fresh market. Texas has maintained its position as a supplier to the spring market, with Mexican shipments offering some competition during the early part of Texas' marketing season. The eastern yellow globe producing States continue to lose ground to the western producing areas. The Idaho-Eastern Oregon region has also assumed a larger role in supplying the national market in recent years.

The combined per capita use of dehydrated onion products and fresh market dry onions has held steady

Cabbage: Production in leading States

State	Production			Percent of U.S. total		
	1957-59 average	1967-69 average	1974	1957-59 average	1967-69 average	1974
	1,000 cwt.	*1,000 cwt.*	*1,000 cwt.*	*Percent*	*Percent*	*Percent*
New York	3,464	4,131	3,977	16	17	16
Florida	2,317	3,731	4,188	10	16	17
California	2,521	2,484	2,201	11	10	9
Texas	2,107	2,323	3,588	10	10	14
Wisconsin	1,756	1,868	1,856	8	8	7
North Carolina	1,211	1,107	1,197	5	5	5
Michigan	663	780	822	3	3	3
Other States	8,131	7,260	6,919	37	31	28
[1] Total U.S.	22,170	23,684	24,748	100	100	100

[1] May not add due to rounding.

Onions: Production in leading States

State	Production			Percent of U.S. total		
	1957-59 average	1967-69 average	1974	1957-59 average	1967-69 average	1974
	1,000 cwt.	*1,000 cwt.*	*1,000 cwt.*	*Percent*	*Percent*	*Percent*
California	4,301	7,181	10,854	17	25	32
Texas	3,625	4,446	5,156	15	16	15
New York	4,562	3,905	3,973	19	14	12
Oregon	2,002	2,837	3,576	8	10	11
Michigan	2,232	2,123	2,139	9	7	6
Colorado	2,175	1,735	1,479	9	6	4
Idaho	703	1,676	2,070	3	6	6
Other States	4,979	4,625	4,245	20	16	13
[1] Total U.S.	24,579	28,528	33,492	100	100	100

[1] May not add due to rounding.

since World War II. But since that time, some institutional markets have shifted to using onions in the dehydrated form. In the 1970's, the per capita use of the fresh market product holds close to 10 pounds annually. The dehydrated market accounts for an additional 2.5 pounds fresh weight basis. It is possible that some additional shift to dehydrated or frozen onion products will take place in the years ahead, but total fresh equivalent use is not expected to change very much.

Fewer Processors—More Tonnage

One of the more striking changes in the processing vegetable industry has been the concentration of activity in the hands of a few large primary processors. The U.S. Census of Manufactures shows only part of the picture as primary processors, repackers, and specialty users are not clearly separated. Fruits and vegetables are combined, too. Census data do show a continued decline in the number of fruit and vegetable canners from 1958 through 1972, with the decline of the 1960's persisting into the 1970's. There were 1,014 firms canning fruit and vegetables in 1972 contrasted with 1,223 in 1967. Value added by manufacturer moved up 13 percent to $1.4 billion during the same time span.

A separate check was made in the Directory of the Canning, Freezing, and Preserving Industries[7] for 1970 and 1974. The number of firms processing tomatoes in the three major production areas of the United States dropped from 177 to 124 in those years, for a decline of 30 percent. Tomato paste manufacture centers largely in the hands of five or six large multiple plant firms with extensive operations in California. The raw tomato tonnage handled in 1974 was fully a third more than 1970. Average plant capacity has therefore moved up markedly. The tomato industry in 1975 likely will be handling 10-15 percent more tonnage than 1974.

[7] *Directory of the Canning Trade*, Edward Judge & Son, Westminster, Md.

In 1972, there were 198 vegetable freezers reported in the Census of Manufactures. Earlier data combined frozen specialty packers with primary packers so that direct comparisons with past years cannot be made. However, it is likely that the number of specialty packers grew rapidly during the 1960's, and that the number of primary packers dropped moderately. In 1972, there were 634 specialty and primary packers compared with 607 in 1967 and 650 in 1963.

West Made Substantial Gains in Processing Vegetables

Since the 1967-69 period, processing vegetable production has shifted significantly further in the direction of the three Pacific Coast States and Idaho. Nearly 60 percent of U.S. output comes from those four States alone. The total annual average volume of vegetables processed during 1972-74 increased only moderately from the earlier period, reflecting in some measure the abnormally large 1968 pack. Much of this rather dramatic westward shift resulted from sharply expanded California tomato production, made at the expense of Indiana, Ohio, and a crescent of States eastward to the Mid-Atlantic Coast.

In the Pacific Northwest, processing activity has held generally stable since 1967-69. However, Washington sweet corn production declined sharply until recent years when a moderate recovery was staged. Oregon, on the other hand, showed a gain in output. In terms of tonnage, snap beans are an Oregon specialty with peas the favored crop in Washington.

While the North Central States lost ground as a source of processing vegetables the Upper Lake States of Wisconsin, Minnesota, and Michigan generally held their own or increased average annual output the past 7 years. Wisconsin showed an increase, and as a result a third of all processing tonnage in the North Central States is now centered in this State. Minnesota follows with 22 percent of the regional output. The Midwest features snap beans,

sweet corn, and pickling cucumbers. Canning rather than freezing predominates.

By 1974, 52 percent of all U.S. vegetable processing activity took place in California. Tomatoes were the leading crop, but lima beans, snap beans, peas, spinach, asparagus, broccoli, carrots, and cauliflower were also produced in commercial volume. Items not estimated by Federal-State crop reporters in California are sweet corn, beets, and cabbage for kraut. After California, Wisconsin was the second largest processing vegetable producer in 1974, followed by Oregon and Minnesota.

Processing Tomatoes

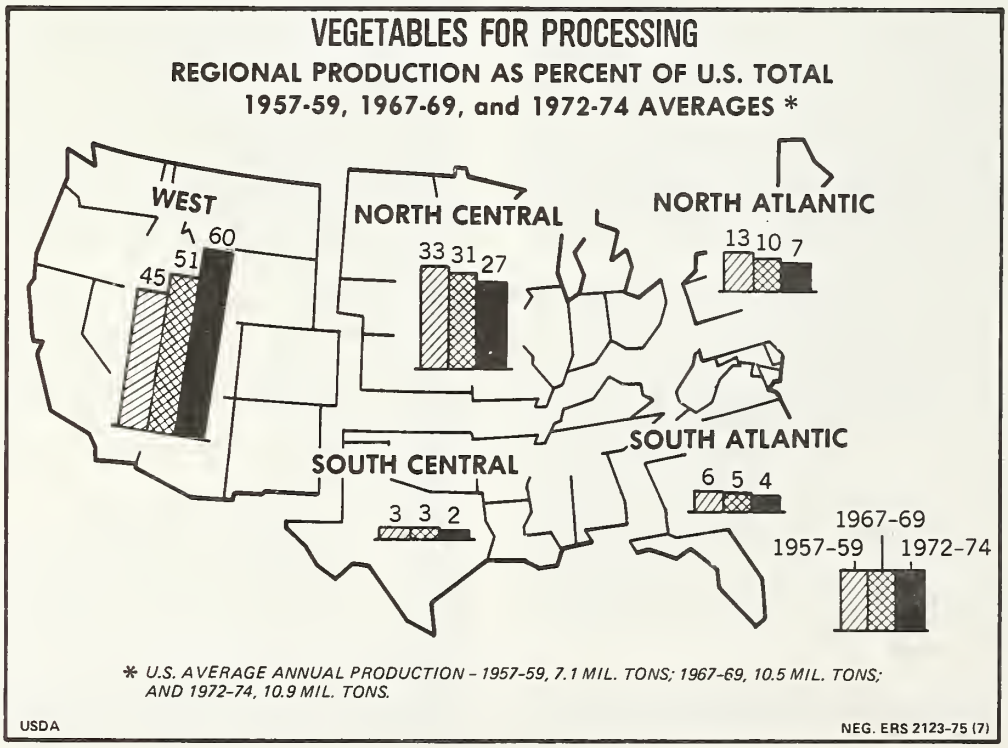
In 1974, tomatoes grown for processing accounted for 56 percent of the tonnage of 13 major processing vegetables, with California providing 83 percent of the U.S. total tomato production. As the accompanying table shows, this State has long dominated the tomato industry. Practically all the concentrated items are packed there, along with large quantities of canned tomatoes and juice. The States from Indiana eastward to New Jersey and Delaware also provide some canned tomatoes, juice, and a few specialties. The realtive ease of mechanical harvesting and use of high yielding varieties, with resulting lower unit production costs, have favored the shift of this industry westward. More recently, environmental issues have become a factor in industry location. Meeting costs of environmental standards will be more easily accomplished by large processors in the San Joaquin and Sacramento Valleys of California than those in the densely populated areas of the East and Midwest where tomatoes are still grown.[8] When Environmental Protection Agency regulations become fully implemented in 1983, it is likely that only a few of the smaller tomato plants remaining in the East and Midwest will be able to compete with California. If they do, then it will result from favorable municipal sewage rates or the availability of inexpensive land for spray irrigation.[9]

Processing Sweet Corn

Processed sweet corn consumption per capita increased steadily until the late 1960's, both for the frozen and canned forms. Since then, use has leveled off. As a result the geographical specialization that took place in the industry during the 1960's has changed little in recent years. The Pacific Northwest, including Idaho, still accounts for about 30-32 percent of the U.S. tonnage. The Midwest retains about 55-57 percent of the total. Within the Midwest there has been some shift away from Illinois to the upper Lake States. Other States continue to decline slowly in importance. As a result, six States accounted for 88

[8]Peter Emerson, "Some Economic Consequences of Forthcoming Water Pollution Control Regulations on the Processing Tomato Industry," p. 104 manuscript to be published late 1975, CED-ERS-USDA.

[9]Op. cit., p. 105.



Tomatoes for processing: Production in leading States

State	Production			Percent of U.S. total		
	1957-59 average	1967-69 average	1974	1957-59 average	1967-69 average	1974
	Tons	*Tons*	*Tons*	*Percent*	*Percent*	*Percent*
California	2,215,964	3,822,933	5,847,650	60	67	83
Ohio	232,400	535,233	368,200	6	9	5
Indiana	229,233	282,783	172,450	6	5	2
New Jersey	199,766	291,183	231,550	5	5	3
Other States	834,083	754,133	400,000	22	1 3	6
[1] Total U.S.	3,711,446	5,686,265	7,019,850	100	100	100

[1] May not add due to rounding.

Sweet corn for processing: Production in leading States

State	Production[1]			Percent of U.S. total		
	1957-59 average	1967-69 average	1974	1957-59 average	1967-69 average	1974
	Tons	*Tons*	*Tons*	*Percent*	*Percent*	*Percent*
Minnesota	328,300	552,683	465,500	22	25	23
Wisconsin	341,599	468,550	452,300	23	21	22
Washington	78,900	283,550	230,450	5	13	11
Oregon	83,800	257,233	299,300	6	12	14
Illinois	200,666	253,467	203,000	14	11	10
Idaho	64,433	123,900	152,850	4	6	7
Other States	381,157	290,800	251,400	26	13	12
Total U.S.[2]	1,478,855	2,230,181	2,054,800	100	100	100

[1] In husk. [2] May not add due to rounding.

percent of all processing tonnage in 1974. Canning is emphasized in the Midwest, freezing in the Pacific Northwest.

Processing Snap Beans

Processed snap beans, especially canned, have continued to find new favor with the public in the 1970's. The 1974 tonnage was up a fifth over the 1967-69 average and more than double the 1957-59 period. This partly results from the introduction of new varieties with superior flavor, and partly the realization that snap beans are a low calorie vegetable choice which fits the dietary needs of many. Also, the younger age groups apparently find them more acceptable than other vegetable choices.

Snap beans are more widely grown than the other leading processed vegetables though there are concentrated production areas in both New York and the Willamette Valley of Oregon. The latter region is long famous for its Blue Lake pole variety and subsequent bush strains. The most recent industry expansion has taken place in the upper Great Lake States of Wisconsin plus some assistance from Michigan. Tennesse and the Delmarva Peninsula also provide moderate amounts, although Maryland activity has slackened with Delaware more than compensating for the loss.

Green Peas for Processing

Processing pea tonnage has changed a little in recent years. Consumers have been using more of other vegetables. Nonetheless, both frozen and canned per capita use have declined only moderately in recent years. Peas are still a major processed vegetable, and will remain so for some time to come.

Minnesota and Wisconsin have been picking up tonnage shifts from numerous eastern and midwestern areas. These two States now account for more than 40 percent of all U.S. tonnages, with most of the output for canning. The Pacific Northwest generally has maintained its one-third share of the total supply. In 1974, these four States accounted for three-fourths of all tonnage, with small amounts from California, Idaho, and Delmarva Peninsula.

Cucumbers for Pickles

The pickle industry has been one of the more rapidly growing processing vegetable enterprises.

Snap Beans for processing: Production in leading States

State	Production			Percent of U.S. total		
	1957-59 average	1967-69 average	1974	1957-59 average	1967-69 average	1974
	Tons	*Tons*	*Tons*	*Percent*	*Percent*	*Percent*
Oregon	86,000	148,400	181,450	24	24	24
New York	63,000	99,500	102,400	17	16	14
Wisconsin	32,647	92,083	155,550	9	15	21
Michigan	11,333	21,250	35,600	3	3	5
Tennessee	15,533	19,317	30,350	4	3	4
Maryland	14,833	18,733	17,200	4	3	2
Delaware	5,067	14,650	22,100	1	2	3
Other States	135,823	196,400	198,100	37	32	27
[1] Total U.S.	364,056	610,333	743,150	100	100	100

[1] May not add due to rounding.

Green peas for processing: Production in leading States

State	Production			Percent of U.S. total		
	1957-59 average	1967-69 average	1974	1957-59 average	1967-69 average	1974
	Tons	*Tons*	*Tons*	*Percent*	*Percent*	*Percent*
Wisconsin	136,306	148,800	172,650	27	26	30
Washington	96,757	133,533	129,000	19	24	23
Minnesota	57,627	76,233	81,300	11	13	14
Oregon	67,343	48,733	52,900	13	9	9
Other States	147,530	158,617	136,850	29	28	24
[1] Total U.S.	505,563	565,916	572,700	100	100	100

[1] May not add due to rounding.

Cucumbers for pickles: Production in leading States

State	Production			Percent of U.S. total		
	1957-59 average	1967-69 average	1974	1957-59 average	1967-69 average	1974
	Tons	*Tons*	*Tons*	*Percent*	*Percent*	*Percent*
Michigan	106,650	100,537	115,900	30	18	19
North Carolina	32,563	76,930	69,100	9	14	12
California	30,560	56,567	66,150	9	10	10
Wisconsin	45,890	44,730	44,550	13	8	7
Texas	12,157	30,460	29,300	3	5	5
Ohio	5,533	27,707	52,300	2	5	9
Colorado	15,166	16,160	23,500	4	3	4
South Carolina	2,617	10,800	20,750	1	2	3
Other States	100,870	196,380	180,200	29	35	30
[1] Total U.S.	352,006	560,271	595,750	100	100	100

[1] May not add due to rounding.

U.S. pickle production in the late 1960's was 57 percent larger than the 1957-59 average. This rapid advance has encouraged production in a number of States, so that pickle production is much less concentrated than most other processing crops. Michigan has long been the most important producer, but is now being challenged by North Carolina. Other States which have expanded production markedly include Ohio, South Carolina, Texas, and California.

More Tightly Organized Vegetable Marketing to Come

Even though larger quantities of fresh vegetables will be needed in the late 1970's and 1980's, the marketing operation could become more concentrated in fewer hands, each performing a more specialized task. In the newer food distribution centers which serve the larger cities, one sees more tomato repackers and institutional suppliers, but fewer general line wholesalers. This has the effect of creating a series of submarkets, some of which are not closely related at all to other segments of the produce industry. Moving closer to the source, there will be fewer grower-shippers to handle large volumes of produce from major shipping points like El Centro, Salinas, Belle Glade, Zellwood, Weslaco, Nogales, and Benton Harbor. These men find themselves dealing with fewer buyers, and as this weeding out process evolves, these shippers and receivers become more closely tied to each other. In some instances, this relationship assumes the pattern of an informally vertically integrated entity. A parallel relationship has developed between chain buyers and a corps of grower shippers. Many of these relationships will tend to become more formal and more frequent in the years ahead.

More Processing Vegetable Growers Organizing to Bargain

As with marketing fresh vegetables, fewer and larger grower and processing operations will be providing larger quantities of canned and frozen vegetables to the U.S. market. With the industry already highly mechanized and with capital needs of both growers and processors continuing to expand rapidly, both elements are now forced to a greater degree of cooperation than was the pattern in earlier decades. Growers have been obliged to become far more sophisticated in the calculation of their production costs. As a result, they have become more active in bargaining organizations which represent them in their price negotiations with processors. These organizations showed considerable strength during the unusual 1974 season and their influence may be expected to grow in the future. Statewide bargaining is now a fact for some commodities, and the bargaining process is now required by law in a few instances.

Even though processed vegetables have become more important, and will continue to be, few new firms have been attracted to this industry. The number of processing firms is not likely to grow larger; rather they may add to their present capacity or build more new plants. Also, they may seek new capital by merger or by being acquired by other firms.

Therefore, in the absence of economic legislation or social pressures to the contrary, the U.S. vegetable industry will become more tightly molded the next few years. Existing institutional arrangements could become more formal. Except for local direct-to-consumer selling that has become fairly important in the Northeastern U.S., the economic structure of the vegetable industry will look even more like a highly sophisticated integrated industrial enterprise, and less like the traditional agricultural ventures of the past with their many small atomistic firms.

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